

AA903406, AA903406 ok62c11.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.67
 AA461270, AA461270 zx63b07.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
 AA927863, AA927863 om18a08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.67
 AA587486, AA587486 nn84e09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.67
 W47466, W47466 zc34h02.r1 Soares senescent fibroblasts NbHSF ... 40 0.67
 AA022495, AA022495 ze70e04.s1 Soares fetal heart NbHH19W Homo... 40 0.67
 AA460961, AA460961 zx63b07.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
 AA393904, AA393904 zt85e06.r1 Soares testis NHT Homo sapiens ... 40 0.67
 AA872272, AA872272 oh72a11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.67
 W47341, W47341 zc34h02.s1 Soares senescent fibroblasts NbHSF ... 40 0.67
 N72024, N72024 yz96g01.s1 Homo sapiens cDNA clone 290928 3'. 40 0.67
 N35076, N35076 yy19b08.s1 Homo sapiens cDNA clone 271671 3'. 40 0.67
 AA813115, AA813115 aj44d06.s1 Soares testis NHT Homo sapiens ... 40 0.67
 AA826741, AA826741 85f12.s1 NCI_CGAP_Pr24 Homo sapiens cDNA... 40 0.67
 AA160827, AA160827 zo62e01.s1 Stratagene pancreas (#937208) H... 40 0.67
 AI040354, AI040354 oy33d12.x1 Soares_parathyroid_tumor_NbHPA ... 40 0.67
 AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.67
 AA416559, AA416559 zu18c03.r1 Soares NhHMPu S1 Homo sapiens c... 40 0.67
 AA401079, AA401079 zv66d01.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
 AI005204, AI005204 ou60c12.x1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.67
 N21678, N21678 yx63g01.s1 Soares melanocyte 2NbHM Homo sapien... 40 0.67
 AA824270, AA824270 aj29f01.s1 Soares testis NHT Homo sapiens ... 40 0.67
 AA804907, AA804907 oa89a01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.67
 AA759038, AA759038 ah75h11.s1 Soares testis NHT Homo sapiens ... 40 0.67
 AA417295, AA417295 zu18c03.s1 Soares NhHMPu S1 Homo sapiens c... 40 0.67
 AA628544, AA628544 af27h12.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.67
 AA618498, AA618498 np30a11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 40 0.67
 AA503727, AA503727 ne49g02.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.67
 AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.67
 AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.67
 AA770473, AA770473 ah89h06.s1 Soares NFL T GBC S1 Homo sapien... 40 0.67
 AA759377, AA759377 ah54a10.s1 Soares testis NHT Homo sapiens ... 40 0.67
 AA629243, AA629243 zu77e03.s1 Soares testis NHT Homo sapiens ... 40 0.67
 AA262162, AA262162 zs25b12.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.67
 AA161105, AA161105 zo58c05.s1 Stratagene pancreas (#937208) H... 38 2.6
 AA852281, AA852281 NHTBCae11g05r1 Normal Human Trabecular Bon... 38 2.6
 AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.6
 AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.6
 N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.6
 AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.6
 AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.6
 H30248, H30248 yp42a01.s1 Homo sapiens cDNA clone 190056 3'. 38 2.6
 R82551, R82551 yj19d06.r1 Homo sapiens cDNA clone 149195 5'. 38 2.6

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 1e-43
AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 40 0.24
AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.24
AA103139, AA103139 mol17f05.r1 Life Tech mouse embryo 13 5dpc ... 40 0.24
AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 40 0.24
AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 40 0.24
AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.24
AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 40 0.24
AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.24
AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 40 0.24
AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 40 0.24
AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 40 0.24
W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 40 0.24
AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.24
AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 40 0.24
AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 40 0.24
AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 40 0.24
AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 40 0.24
AA797372, AA797372 vw27b08.r1 Soares mouse mammary gland NbMM... 40 0.24
W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.24
AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.24
AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 40 0.24
AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 40 0.24
AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 40 0.24
AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 40 0.24
W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.24
AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 40 0.24
AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.94
AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 3.7
C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 3.7
AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 3.7
W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.7
AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 3.7
AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 3.7
W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.7
AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 3.7
AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 3.7
AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 3.7

AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 3.7
 AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 3.7
 AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 3.7
 AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.7
 W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.7
 AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12 5 Mus muscu... 36 3.7
 AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.7
 AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 3.7
 AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 3.7
 AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 3.7
 AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 3.7
 AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 3.7
 AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 3.7
 AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.7
 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 3.7

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.053
 C83463, C83463 Oryctolagus cuniculus corneal endothelial cDN... 38 0.84
 AA859448, AA859448 UI-R-A0-bf-b-01-0-UI.s1 UI-R-A0 Rattus nor... 38 0.84
 AA874930, AA874930 UI-R-E0-ci-b-05-0-UI.s1 UI-R-E0 Rattus nor... 38 0.84
 C82607, C82607 Oryctolagus cuniculus corneal endothelial cDN... 38 0.84
 AI009631, AI009631 EST204082 Normalized rat lung, Bento Soare... 38 0.84
 AA801145, AA801145 EST190642 Normalized rat ovary, Bento Soar... 38 0.84
 AI012760, AI012760 EST207211 Normalized rat placenta, Bento S... 38 0.84
 AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.84
 AA801144, AA801144 EST190641 Normalized rat ovary, Bento Soar... 38 0.84
 AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' ... 38 0.84
 AA859865, AA859865 UI-R-E0-cc-b-04-0-UI.s1 UI-R-E0 Rattus nor... 38 0.84
 AI009035, AI009035 EST203486 Normalized rat embryo, Bento Soa... 38 0.84
 AA859542, AA859542 UI-R-E0-br-d-03-0-UI.s1 UI-R-E0 Rattus nor... 38 0.84
 T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.84
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 3.3
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 3.3
 D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.3
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.3
 C68472, C68472 C.elegans cDNA clone yk305a12 : 5' end, singl... 36 3.3
 AA785775, AA785775 h4b05a1.f1 Aspergillus nidulans 24hr asexu... 36 3.3
 D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.3
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.3
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.3
 Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 3.3
 AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.3
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.3
 Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 3.3

SEQ ID NO:548

U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.34
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.34
 U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.34
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 1.3
 AC004301, AC004301 Drosophila melanogaster DNA sequence (P1 D... 40 1.3
 U86662, LEU86662 Lycopersicon esculentum VPS41 (tVPS41) mRNA,... 40 1.3
 U85773, HSU85773 Human phosphomannomutase (PMM2) mRNA, comple... 40 1.3

HUMAN ESTs

W22160, W22160 63A6 Human retina cDNA Tsp509I-cleaved sublibr... 791 0.0
 AA860926, AA860926 ak22d06.s1 Soares testis NHT Homo sapiens ... 650 0.0
 AA348243, AA348243 EST54707 Hippocampus I Homo sapiens cDNA 5... 513 e-143
 AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 363 3e-98
 AA327309, AA327309 EST30621 Colon I Homo sapiens cDNA 5' end 353 3e-95
 AA344913, AA344913 EST50856 Gall bladder II Homo sapiens cDNA... 337 2e-90
 AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) Homo... 317 2e-84
 AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) Homo... 317 2e-84
 AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR Homo sapie... 42 0.16
 AA041240, AA041240 zf07g05.r1 Soares fetal heart NbHH19W Homo... 40 0.64
 AA039536, AA039536 zk39h10.s1 Soares pregnant uterus NbHPU Ho... 40 0.64
 AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.64
 AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.64
 N35888, N35888 yy28b05.s1 Homo sapiens cDNA clone 272529 3'. 40 0.64
 AA888147, AA888147 04h11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.64
 AA172158, AA172158 zp29a01.s1 Stratagene neuroepithelium (#93... 40 0.64
 AA877455, AA877455 ob33g01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.64
 R02514, R02514 ye70b08.r1 Homo sapiens cDNA clone 123063 5'. 40 0.64
 AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.64
 AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.5
 N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.5
 AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.5
 AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.5
 AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.5
 AA852281, AA852281 NHTBCae11g05r1 Normal Human Trabecular Bon... 38 2.5

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 1e-43
 AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.23
 AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.23
 AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.23
 AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.23
 AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.23
 AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.23
 AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.23
 AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.91
 AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.6
 AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.6
 W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.6
 AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 3.6
 AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 3.6
 AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 3.6
 W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.6
 AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 3.6
 AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.6
 AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 3.6
 AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 3.6
 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 3.6
 AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12 5 Mus muscu... 36 3.6
 AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 3.6
 C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 3.6
 AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 3.6
 AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 3.6
 AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 3.6
 AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 3.6
 AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 3.6
 W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.6
 AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 3.6
 AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 3.6
 AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 3.6

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.052
 T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.81
 AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' ... 38 0.81
 AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.81
 D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.2
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.2
 AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.2
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.2
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 3.2
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.2

D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.2
 Z32603, ATTS2731 *A. thaliana* transcribed sequence; clone PAP... 36 3.2
 AA785775, AA785775 h4b05a1.fl *Aspergillus nidulans* 24hr asexu... 36 3.2
 C68472, C68472 *C.elegans* cDNA clone yk305a12 : 5' end, singl... 36 3.2
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 3.2
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.2
 Z32602, ATTS2730 *A. thaliana* transcribed sequence; clone PAP... 36 3.2

SEQ ID NO:549

U79271, HSU79271 Human clones 23920 and 23921 mRNA sequence 650 0.0
 AC000395, AC000395 Genomic sequence from Human 9q34, complete... 42 0.28
 AC004636, AC004636 *Homo sapiens* chromosome 5, P1 clone 1268h6... 42 0.28
 M94579, HUMCEL Human carboxyl ester lipase (CEL) gene, comple... 42 0.28
 AC002097, AC002097 *Homo sapiens* chromosome 9q34, clone 246H5... 42 0.28
 AB006709, AB006709 *Vibrio alginolyticus* rpoN gene for RNA po... 42 0.28
 Z47074, CEK07C10 *Caenorhabditis elegans* cosmid K07C10, compl... 40 1.1
 AC004755, AC004755 *Homo sapiens* chromosome 19, fosmid 37502, ... 40 1.1
 Z28051, SCYKL051W *S.cerevisiae* chromosome XI reading frame O... 40 1.1
 AF022655, AF022655 *Homo sapiens* cep250 centrosome associated ... 40 1.1
 AB006708, AB006708 *Arabidopsis thaliana* genomic DNA, chromos... 40 1.1
 AF049105, AF049105 *Homo sapiens* centrosomal Nek2-associated p... 40 1.1
 Z28050, SCYKL050C *S.cerevisiae* chromosome XI reading frame O... 40 1.1
 X75781, SCXI286K *S.cerevisiae* chromosome XI (28.6 kb) DNA fo... 40 1.1
 Y16899, DMY16899 *Drosophila melanogaster* mRNA for optomotor-... 38 4.3
 M87854, RATBARK1 *Rattus norvegicus* beta-adrenergic receptor k... 38 4.3
 M74822, RATMHTLL Rat MHC class I TL-like protein gene, comple... 38 4.3
 M80776, HUMBARK1A Human beta-adrenergic receptor kinase 1 mRN... 38 4.3
 D84549, YSACA *Candida tropicalis* DNA for carnitine acetyltra... 38 4.3
 L23127, RATRMCI *Rattus norvegicus* germline MHC class I gene, ... 38 4.3
 AC004257, AC004257 *Homo sapiens* chromosome 19, cosmid R33209... 38 4.3
 U70850, CELF28F9 *Caenorhabditis elegans* cosmid F28F9 38 4.3
 U88309, CELT23B3 *Caenorhabditis elegans* cosmid T23B3 38 4.3
 X53421, DVCHOS18 *D. virilis* s18, s15, s19, s16 chorion prote... 38 4.3
 D89245, D89245 *Schizosaccharomyces pombe* mRNA, partial cds, ... 38 4.3
 AF009623, AF009623 *Parascaris univalens* PUMA1 (puma1) mRNA, c... 38 4.3
 S48813, S48813 beta-adrenergic receptor kinase [rats, brain, ... 38 4.3
 Z67883, CEK02A4 *Caenorhabditis elegans* cosmid K02A4, complet... 38 4.3
 U90567, GGU90567 *Gallus gallus* glutamine rich protein mRNA, p... 38 4.3
 M98498, BOVEZRINA *Bos taurus* ezrin mRNA, complete cds. 38 4.3
 M34073, MUSMHT10C *Mus musculus* (clone T10-c) MHC class I cell... 38 4.3

S81843, S81843 beta-adrenergic receptor kinase 1 [Syrian hams... 38 4.3
 X61157, HSBARK H.sapiens mRNA for beta-adrenergic receptor k... 38 4.3
 U08438, HSNBARKS4 Human beta-adrenergic receptor kinase (ADRB... 38 4.3
 U39674, CELC06E2 Caenorhabditis elegans cosmid C06E2. 38 4.3

HUMAN ESTs

W29097, W29097 56d11 Human retina cDNA randomly primed sublib... 1045 0.0
 AA886109, AA886109 ny44f05.s1 NCI_CGAP_Pr12 Homo sapiens cDNA... 656 0.0
 AA829894, AA829894 oe51e12.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 650 0.0
 AA879456, AA879456 oj91g03.s1 Soares_NFL_T_GBC_S1 Homo sapien... 650 0.0
 AA029201, AA029201 zk12f08.s1 Soares pregnant uterus NbHPU Ho... 650 0.0
 AA102109, AA102109 zk87g11.s1 Soares pregnant uterus NbHPU Ho... 650 0.0
 AA843811, AA843811 ak09c08.s1 Soares parathyroid tumor NbHPA ... 650 0.0
 W72147, W72147 zd70f08.s1 Soares fetal heart NbHH19W Homo sap... 650 0.0
 N51485, N51485 yz04e06.s1 Homo sapiens cDNA clone 282082 3'. 650 0.0
 AI033069, AI033069 ow93f02.s1 Soares_fetal_liver_spleen_1NFLS... 642 0.0
 AA161465, AA161465 zo73a06.s1 Stratagene pancreas (#937208) H... 638 0.0
 N51277, N51277 yz14d07.s1 Homo sapiens cDNA clone 283021 3'. 636 e-180
 N64528, N64528 yz91e06.s1 Homo sapiens cDNA clone 290434 3'. 636 e-180
 H99906, H99906 yx32h10.s1 Homo sapiens cDNA clone 263491 3'. 636 e-180
 AA812519, AA812519 ai79b03.s1 Soares testis NHT Homo sapiens ... 636 e-180
 R71679, R71679 yj85e08.s1 Homo sapiens cDNA clone 155558 3'. 628 e-178
 AA744290, AA744290 ny51d02.s1 NCI_CGAP_Pr18 Homo sapiens cDNA... 626 e-177
 AI038590, AI038590 ox34e03.s1 Soares_total_fetus_Nb2HF8_9w Ho... 624 e-177
 AA099913, AA099913 zk87g11.r1 Soares pregnant uterus NbHPU Ho... 624 e-177
 AA083859, AA083859 zn16d06.s1 Stratagene neuroepithelium NT2R... 622 e-176
 AA883684, AA883684 al58a05.s1 Soares NFL T GBC S1 Homo sapien... 613 e-173
 R39448, R39448 yc95d03.s1 Homo sapiens cDNA clone 23921 3'. 593 e-167
 R36854, R36854 yf52c07.s1 Homo sapiens cDNA clone 25899 3'. 591 e-167
 H98684, H98684 yx17g01.s1 Homo sapiens cDNA clone 262032 3'. 585 e-165
 R07471, R07471 ye97a06.s1 Homo sapiens cDNA clone 125650 3'. 581 e-164
 AA910762, AA910762 ol25h06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 559 e-157
 AA083954, AA083954 zn17d06.s1 Stratagene neuroepithelium NT2R... 555 e-156
 AA346369, AA346369 EST52776 Fetal heart II Homo sapiens cDNA ... 545 e-153
 R54092, R54092 yg98d07.s1 Homo sapiens cDNA clone 41818 3'. 539 e-151
 H09074, H09074 yl97a06.s1 Homo sapiens cDNA clone 46164 3'. 535 e-150
 N21975, N21975 yw30c10.s1 Homo sapiens cDNA clone 253746 3'. 533 e-149
 D59844, HUM070E11A Human fetal brain cDNA 3'-end GEN-070E11. 466 e-129
 H11525, H11525 ym15h07.s1 Homo sapiens cDNA clone 48232 3'. 442 e-122
 AA971254, AA971254 op73c08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 442 e-122
 W77907, W77907 zd70f08.r1 Soares fetal heart NbHH19W Homo sap... 428 e-118
 AA878973, AA878973 oj26d11.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 389 e-106
 AA715235, AA715235 nv10g01.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 357 2e-96

AA328928, AA328928 EST32475 Embryo, 12 week I Homo sapiens cD... 355 7e-96
 AA860455, AA860455 aj80f02.s1 Soares parathyroid tumor NbHPA ... 283 2e-74
 AA026096, AA026096 ze97a04.r1 Soares fetal heart NbHH19W Homo... 268 1e-69
 AA026516, AA026516 ze97a04.s1 Soares fetal heart NbHH19W Homo... 172 6e-41
 T26899, T26899 ESTDIR509 Homo sapiens cDNA clone CDDIR509 3'. 170 2e-40
 N71178, N71178 yw30c10.r1 Homo sapiens cDNA clone 253746 5'. 165 1e-38
 AA372290, AA372290 EST84170 Raji cells, cyclohexamide treated... 98 3e-18
 AI038890, AI038890 ox84g12.x1 Soares_senescent_fibroblasts_Nb... 40 0.53
 D81647, HUM180D08B Human fetal brain cDNA 5'-end GEN-180D08. 38 2.1
 AA452630, AA452630 zx33f08.r1 Soares total fetus Nb2HF8 9w Ho... 38 2.1
 AA682624, AA682624 zi19g01.s1 Soares fetal liver spleen 1NFLS... 38 2.1
 AA742364, AA742364 ny89c12.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.1
 AA907234, AA907234 ol03h08.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 38 2.1
 T09391, T09391 EST07284 Homo sapiens cDNA clone HIBBT71 5' en... 38 2.1
 AA161236, AA161236 zo59h07.s1 Stratagene pancreas (#937208) H... 38 2.1
 AA252941, AA252941 zr50g09.r1 Soares NhHMPu S1 Homo sapiens c... 38 2.1
 AA252245, AA252245 zr64g07.s1 Soares NhHMPu S1 Homo sapiens c... 38 2.1
 AA780678, AA780678 ac70h01.s1 Stratagene fetal retina 937202 ... 38 2.1
 W05501, W05501 za84a12.r1 Soares fetal lung NbHL19W Homo sapi... 38 2.1
 AI039908, AI039908 ox25f07.x1 Soares_total_fetus_Nb2HF8_9w Ho... 38 2.1
 AA280664, AA280664 zs99f09.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.1
 AA973566, AA973566 oo46f09.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 38 2.1
 N27253, N27253 yx17g01.r1 Homo sapiens cDNA clone 262032 5'. 38 2.1
 AA995707, AA995707 os29c09.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 38 2.1
 AI016407, AI016407 ot72e09.s1 Soares_total_fetus_Nb2HF8_9w Ho... 38 2.1
 N70619, N70619 za84a12.s1 Homo sapiens cDNA clone 299230 3'. 38 2.1
 AA242923, AA242923 zr64g07.r1 Soares NhHMPu S1 Homo sapiens c... 38 2.1
 AA938631, AA938631 oo96f07.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 38 2.1
 AA985290, AA985290 am74g03.s1 Stratagene schizo brain S11 Hom... 38 2.1

AA690806, AA690806 vt25h10.r1 Barstead mouse myotubes MPLRB5 ... 377 e-103
 AA155014, AA155014 mr99h05.r1 Stratagene mouse embryonic carc... 180 8e-44
 AA269966, AA269966 va57d06.r1 Soares mouse 3NME12 5 Mus muscu... 172 2e-41
 AA089195, AA089195 mo05h11.r1 Stratagene mouse lung 937302 Mu... 163 2e-38
 AA466212, AA466212 vg86g02.r1 Barstead mouse pooled organs MP... 68 8e-10
 AA423476, AA423476 ve76d07.r1 Soares mouse mammary gland NbMM... 60 2e-07
 AA597213, AA597213 vo28a05.r1 Barstead mouse irradiated colon... 40 0.19
 AA396266, AA396266 vb45c01.r1 Soares mouse lymph node NbMLN M... 40 0.19
 AA967806, AA967806 uh05d06.r1 Soares mouse hypothalamus NMHy ... 38 0.75
 AA591111, AA591111 vm12c06.r1 Knowles Solter mouse blastocyst... 38 0.75
 W65797, W65797 me14g02.r1 Soares mouse embryo NbME13.5 14.5 M... 38 0.75
 AA153891, AA153891 mq56e05.r1 Soares 2NbMT Mus musculus cDNA ... 38 0.75

AI019772, AI019772 ua90h02.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA472253, AA472253 vh10g05.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA230895, AA230895 mw14g07.r1 Soares mouse 3NME12 5 Mus muscu... 36 3.0
 W18052, W18052 mb83g03.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.0
 AA797681, AA797681 vx66c12.r1 Stratagene mouse skin (#937313)... 36 3.0
 W66734, W66734 me26g05.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.0
 AA968020, AA968020 uh07g01.r1 Soares mouse hypothalamus NMHy ... 36 3.0
 AA051644, AA051644 mj55d12.r1 Soares mouse embryo NbME13.5 14... 36 3.0
 AA162797, AA162797 mr29g09.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA549644, AA549644 vk80f08.s1 Knowles Solter mouse 2 cell Mus... 36 3.0
 AA273295, AA273295 vc01e01.r1 Soares mouse lymph node NbMLN M... 36 3.0
 AA048480, AA048480 mj33d08.r1 Soares mouse embryo NbME13.5 14... 36 3.0
 AA098207, AA098207 mn83d01.r1 Stratagene mouse Tcell 937311 M... 36 3.0
 AA027381, AA027381 mi05c06.r1 Soares mouse placenta 4NbMP13.5... 36 3.0
 AA544474, AA544474 vk33h06.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA416466, AA416466 vd15c09.s1 Knowles Solter mouse 2 cell Mus... 36 3.0
 AA285999, AA285999 vb88h08.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA175025, AA175025 ms85f06.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA544386, AA544386 vk33f06.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA175557, AA175557 ms96g04.r1 Soares mouse 3NbMS Mus musculus... 36 3.0
 AA711924, AA711924 vu59f09.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA734052, AA734052 vv22c10.r1 Stratagene mouse heart (#937316... 36 3.0
 W53738, W53738 md12a12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.0
 AA611837, AA611837 vo82a06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.0
 AA879531, AA879531 vv96f06.r1 Soares mouse mammary gland NbMM... 36 3.0
 AA288625, AA288625 vb23g09.r1 Soares mouse 3NbMS Mus musculus... 36 3.0

 AA784124, AA784124 d2b06a1.f1 Aspergillus nidulans 24hr asexu... 38 0.67
 AI044911, AI044911 UI-R-C1-kk-e-05-0-UI.s1 UI-R-C1 Rattus nor... 36 2.6
 AA550452, AA550452 1605m3 gmbPfHB3.1, G. Roman Reddy Plasmodi... 36 2.6
 F20017, ATTS6056 A. thaliana transcribed sequence; clone TAP... 36 2.6
 AA786697, AA786697 k5d01a1.f1 Aspergillus nidulans 24hr asexu... 36 2.6
 AA433457, AA433457 SW3ICA2345SK Brugia malayi infective larva... 36 2.6

SEQ ID NO:550

U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.20
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.20
 U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.20
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 0.80

AC004301, AC004301 *Drosophila melanogaster* DNA sequence (P1 D... 40 0.80
 U86662, LEU86662 *Lycopersicon esculentum* VPS41 (tVPS41) mRNA,... 40 0.80
 Y14330, HSY14330 *Homo sapiens* partial mRNA for jagged2 protein 38 3.2
 AF003521, AF003521 *Homo sapiens* Jagged 2 mRNA, complete cds 38 3.2
 AF029778, AF029778 *Homo sapiens* Jagged2 (JAG2) mRNA, complete... 38 3.2
 AF020201, AF020201 *Homo sapiens* Jagged 2 mRNA, complete cds 38 3.2
 Z71523, SCYNL247W *S.cerevisiae* chromosome XIV reading frame ... 38 3.2
 AF029779, AF029779 *Homo sapiens* hJAG2.del-E6 (JAG2) mRNA, alt... 38 3.2
 U70049, RNU70049 *Rattus norvegicus* jagged2 precursor gene, pa... 38 3.2
 X96722, SCCHXIVL *S.cerevisiae* DNA region from chromosome XIV... 38 3.2
 AF005938, AF005938 *Cavia porcellus* L-type voltage-dependent c... 38 3.2
 X78972, SBSTRBF *S.bluensis* ISP 5564 genes strB and strF 38 3.2
 X94912, HSPR22 *H.sapiens* Pr22 gene 38 3.2

HUMAN ESTs

AA860926, AA860926 ak22d06.s1 Soares testis NHT *Homo sapiens* ... 650 0.0
 AA348243, AA348243 EST54707 Hippocampus I *Homo sapiens* cDNA 5... 513 e-144
 AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 *Homo sapiens* cDNA ... 363 2e-98
 AA327309, AA327309 EST30621 Colon I *Homo sapiens* cDNA 5' end 353 2e-95
 AA344913, AA344913 EST50856 Gall bladder II *Homo sapiens* cDNA... 337 1e-90
 AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) *Homo*... 317 1e-84
 AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) *Homo*... 317 1e-84
 AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR *Homo sapie*... 42 0.098
 AI005204, AI005204 ou60c12.x1 NCI_CGAP_Br2 *Homo sapiens* cDNA ... 40 0.39
 AA757360, AA757360 ah98a01.s1 Soares NFL T GBC S1 *Homo sapien*... 40 0.39
 AI005324, AI005324 ou13h07.x1 Soares_NFL_T_GBC_S1 *Homo sapien*... 40 0.39
 AA416559, AA416559 zu18c03.r1 Soares NhHMPu S1 *Homo sapiens* c... 40 0.39
 AA262162, AA262162 zs25b12.r1 NCI_CGAP_GCB1 *Homo sapiens* cDNA... 40 0.39
 AA824270, AA824270 aj29f01.s1 Soares testis NHT *Homo sapiens* ... 40 0.39
 AA826741, AA826741 85f12.s1 NCI_CGAP_Pr24 *Homo sapiens* cDNA... 40 0.39
 AA813115, AA813115 aj44d06.s1 Soares testis NHT *Homo sapiens* ... 40 0.39
 AA403143, AA403143 zv66d01.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
 AA725024, AA725024 ah97h10.s1 Soares NFL T GBC S1 *Homo sapien*... 40 0.39
 AA804907, AA804907 oa89a01.s1 NCI_CGAP_GCB1 *Homo sapiens* cDNA... 40 0.39
 AA628544, AA628544 af27h12.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
 AA618498, AA618498 np30a11.s1 NCI_CGAP_Pr22 *Homo sapiens* cDNA... 40 0.39
 AA503727, AA503727 ne49g02.s1 NCI_CGAP_Co3 *Homo sapiens* cDNA ... 40 0.39
 AA460961, AA460961 zx63b07.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
 AA770473, AA770473 ah89h06.s1 Soares NFL T GBC S1 *Homo sapien*... 40 0.39
 AA759377, AA759377 ah54a10.s1 Soares testis NHT *Homo sapiens* ... 40 0.39
 AA629243, AA629243 zu77e03.s1 Soares testis NHT *Homo sapiens* ... 40 0.39
 AA903406, AA903406 ok62c11.s1 NCI_CGAP_GC4 *Homo sapiens* cDNA ... 40 0.39
 AA215903, AA215903 hp0042.seq.F Fetal heart, Lambda ZAP Expre... 40 0.39

AA160827, AA160827 zo62e01.s1 Stratagene pancreas (#937208) H... 40 0.39
 AA577174, AA577174 nm86e11.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 40 0.39
 AA969632, AA969632 op38h05.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.39
 N72025, N72025 yz96g02.s1 Homo sapiens cDNA clone 290930 3'. 40 0.39
 AA974988, AA974988 on59b06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.39
 W32428, W32428 zc05c12.s1 Soares parathyroid tumor NbHPA Homo... 40 0.39
 N21678, N21678 yx63g01.s1 Soares melanocyte 2NbHM Homo sapien... 40 0.39
 AA860208, AA860208 ak48c10.s1 Soares testis NHT Homo sapiens ... 40 0.39
 AA814296, AA814296 nz07d08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
 AA806381, AA806381 oc22g05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
 AA435587, AA435587 zt85d07.s1 Soares testis NHT Homo sapiens ... 40 0.39
 W45005, W45005 zc05c12.r1 Soares parathyroid tumor NbHPA Homo... 40 0.39
 AA393904, AA393904 zt85e06.r1 Soares testis NHT Homo sapiens ... 40 0.39
 AA759038, AA759038 ah75h11.s1 Soares testis NHT Homo sapiens ... 40 0.39
 AA927863, AA927863 om18a08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.39
 AA461270, AA461270 zx63b07.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
 AA417295, AA417295 zu18c03.s1 Soares NhHMPu S1 Homo sapiens c... 40 0.39
 W47466, W47466 zc34h02.r1 Soares senescent fibroblasts NbHSF ... 40 0.39
 AA262229, AA262229 zs25b12.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.39
 AA587486, AA587486 nn84e09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.39
 AA401079, AA401079 zv66d01.s1 Soares total fetus Nb2HF8 9w Ho... 40 0.39
 AA872272, AA872272 oh72a11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.39
 W47341, W47341 zc34h02.s1 Soares senescent fibroblasts NbHSF ... 40 0.39
 N72024, N72024 yz96g01.s1 Homo sapiens cDNA clone 290928 3'. 40 0.39
 N35076, N35076 yy19b08.s1 Homo sapiens cDNA clone 271671 3'. 40 0.39
 AI040354, AI040354 oy33d12.x1 Soares_parathyroid_tumor_NbHPA ... 40 0.39
 AA946650, AA946650 oq38h09.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.39
 AA022495, AA022495 ze70e04.s1 Soares fetal heart NbHH19W Homo... 40 0.39
 AA873216, AA873216 oh70f04.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.39
 R82551, R82551 yj19d06.r1 Homo sapiens cDNA clone 149195 5'. 38 1.5
 H30248, H30248 yp42a01.s1 Homo sapiens cDNA clone 190056 3'. 38 1.5
 AA161105, AA161105 zo58c05.s1 Stratagene pancreas (#937208) H... 38 1.5
 AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 1.5
 AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 1.5
 AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 1.5
 AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 1.5

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 6e-44
 AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 40 0.14
 AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 40 0.14
 AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.14

AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 40 0.14
 AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 40 0.14
 AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.14
 AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.14
 AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 40 0.14
 AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 40 0.14
 AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.14
 AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.14
 AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 40 0.14
 AA103139, AA103139 mo17f05.r1 Life Tech mouse embryo 13 5dpc ... 40 0.14
 AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 40 0.14
 AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 40 0.14
 W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.14
 AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 40 0.14
 AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 40 0.14
 AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 40 0.14
 AA797372, AA797372 vw27b08.r1 Soares mouse mammary gland NbMM... 40 0.14
 AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 40 0.14
 AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 40 0.14
 W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.14
 W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 40 0.14
 AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.14
 AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.55
 AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.2
 AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 2.2
 AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 2.2
 AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 2.2
 C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 2.2
 AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 2.2
 AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 2.2
 AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 2.2
 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 2.2
 AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 2.2
 W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 2.2
 AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 2.2
 AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 2.2
 AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 2.2
 AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 2.2
 AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 2.2
 AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 2.2

AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.2
 AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 2.2

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.031
 AA801145, AA801145 EST190642 Normalized rat ovary, Bento Soar... 38 0.48
 AI012760, AI012760 EST207211 Normalized rat placenta, Bento S... 38 0.48
 AA874930, AA874930 UI-R-E0-ci-b-05-0-UI.s1 UI-R-E0 Rattus nor... 38 0.48
 C82607, C82607 Oryctolagus cuniculus corneal endothelial cDN... 38 0.48
 AA859865, AA859865 UI-R-E0-cc-b-04-0-UI.s1 UI-R-E0 Rattus nor... 38 0.48
 C83463, C83463 Oryctolagus cuniculus corneal endothelial cDN... 38 0.48
 AA801144, AA801144 EST190641 Normalized rat ovary, Bento Soar... 38 0.48
 AA859448, AA859448 UI-R-A0-bf-b-01-0-UI.s1 UI-R-A0 Rattus nor... 38 0.48
 AI009631, AI009631 EST204082 Normalized rat lung, Bento Soare... 38 0.48
 AI009035, AI009035 EST203486 Normalized rat embryo, Bento Soa... 38 0.48
 AA859542, AA859542 UI-R-E0-br-d-03-0-UI.s1 UI-R-E0 Rattus nor... 38 0.48
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 1.9
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 1.9
 Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 1.9
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 1.9
 Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 1.9
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 1.9
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 1.9
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 1.9
 AA785775, AA785775 h4b05a1.fl Aspergillus nidulans 24hr asexu... 36 1.9

SEQ ID NO:551

U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.36
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.36
 U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.36
 U86662, LEU86662 Lycopersicon esculentum VPS41 (tVPS41) mRNA.... 40 1.4
 U85773, HSU85773 Human phosphomannomutase (PMM2) mRNA, comple... 40 1.4
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 1.4
 AC004301, AC004301 Drosophila melanogaster DNA sequence (P1 D... 40 1.4

HUMAN ESTs

W22160, W22160 63A6 Human retina cDNA Tsp509I-cleaved sublibr... 791 0.0
 AA860926, AA860926 ak22d06.s1 Soares testis NHT Homo sapiens ... 650 0.0

AA348243, AA348243 EST54707 Hippocampus I Homo sapiens cDNA 5... 513 e-143
AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 363 4e-98
AA327309, AA327309 EST30621 Colon I Homo sapiens cDNA 5' end 353 4e-95
AA344913, AA344913 EST50856 Gall bladder II Homo sapiens cDNA... 337 2e-90
AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) Homo... 317 2e-84
AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) Homo... 317 2e-84
AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR Homo sapie... 42 0.17
AA877455, AA877455 ob33g01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.68
N35888, N35888 yy28b05.s1 Homo sapiens cDNA clone 272529 3'. 40 0.68
AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.68
AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.68
AA041240, AA041240 zf07g05.r1 Soares fetal heart NbHH19W Homo... 40 0.68
AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.68
R02514, R02514 ye70b08.r1 Homo sapiens cDNA clone 123063 5'. 40 0.68
AA039536, AA039536 zk39h10.s1 Soares pregnant uterus NbHPU Ho... 40 0.68
AA888147, AA888147 04h11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.68
AA172158, AA172158 zp29a01.s1 Stratagene ncuroepithelium (#93... 40 0.68
AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.7
N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.7
AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.7
AA852281, AA852281 NHTBCae11g05r1 Normal Human Trabecular Bon... 38 2.7
AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.7
R14449, R14449 yf81h09.r1 Homo sapiens cDNA clone 29034 5'. 38 2.7
AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.7

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 1e-43
AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.24
AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.24
AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.24
AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.24
AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.24
AA106439, AA106439 ml59a08.r1 Stratagene mouse testis (#93730... 40 0.24
AA250010, AA250010 mz59b12.r1 Soares mouse lymph node NbMLN M... 38 0.97
AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 0.97
AA139459, AA139459 mq86a03.r1 Stratagene mouse melanoma (#937... 38 0.97
AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 36 3.8
AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 3.8
AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 36 3.8
AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 3.8
AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 36 3.8
AA103139, AA103139 mo17f05.r1 Life Tech mouse embryo 13 5dpc ... 36 3.8

AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 3.8
 AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 36 3.8
 AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 36 3.8
 AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 36 3.8
 AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 3.8
 AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 3.8
 W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.8
 AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 3.8
 AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.8
 AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 36 3.8
 AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 3.8
 AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 3.8
 AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 3.8
 AA797372, AA797372 vw27b08.r1 Soares mouse mammary gland NbMM... 36 3.8
 AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 36 3.8
 W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.8
 AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 3.8
 AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 3.8
 AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 3.8
 AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 36 3.8
 W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
 AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 36 3.8
 AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 36 3.8
 AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 36 3.8
 AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 36 3.8
 AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 3.8
 AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 36 3.8
 AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 3.8
 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 3.8
 AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 36 3.8
 AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.8
 C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 3.8
 AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 3.8
 AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12 5 Mus muscu... 36 3.8
 AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 36 3.8
 AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 36 3.8
 AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 36 3.8
 W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
 AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 36 3.8
 AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 3.8
 AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 36 3.8
 W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
 W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.8
 AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 3.8

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.055
 AA891284, AA891284 EST195087 Normalized rat heart, Bento Soar... 40 0.22
 Z83055, RNZ83055 R.norvegicus mRNA; expressed sequence tag; ... 40 0.22
 AI010967, AI010967 EST205418 Normalized rat muscle, Bento Soa... 40 0.22
 AA852049, AA852049 EST194818 Normalized rat spleen, Bento Soa... 40 0.22
 H33489, H33489 EST109542 Rat PC-12 cells, NGF-treated (9 days... 40 0.22
 AA799616, AA799616 EST189113 Normalized rat heart, Bento Soar... 40 0.22
 Z83044, RNZ83044 R.norvegicus mRNA; expressed sequence tag; ... 40 0.22
 AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' 38 0.86
 AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.86
 T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.86
 AA785775, AA785775 h4b05a1.f1 Aspergillus nidulans 24hr asexu... 36 3.4
 AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.4
 AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.4
 C68472, C68472 C.elegans cDNA clone yk305a12 : 5' end, singl... 36 3.4
 AA800635, AA800635 EST190132 Normalized rat lung, Bento Soare... 36 3.4
 Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 3.4
 Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 3.4
 AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.4
 AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.4
 H32878, H32878 EST108396 Rat PC-12 cells, untreated Rattus sp... 36 3.4
 Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.4
 D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.4
 AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 3.4
 AA800634, AA800634 EST190131 Normalized rat lung, Bento Soare... 36 3.4
 D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.4

SEQ ID NO:552

U66201, MMU66201 Mus musculus fibroblast growth factor homolo... 42 0.38
 AF020738, AF020738 Mus musculus fibroblast growth factor-rela... 42 0.38
 U66197, HSU66197 Human fibroblast growth factor homologous fa... 42 0.38
 Z46966, MMIMOGN44 M.musculus mRNA for imogen 44. 40 1.5
 U86662, LEU86662 Lycopersicon esculentum VPS41 (tVPS41) mRNA.... 40 1.5
 U85773, HSU85773 Human phosphomannomutase (PMM2) mRNA, comple... 40 1.5

HUMAN ESTs

W22160, W22160 63A6 Human retina cDNA Tsp509I-cleaved sublibr... 791 0.0
 AA860926, AA860926 ak22d06.s1 Soares testis NHT Homo sapiens ... 650 0.0

AA348243, AA348243 EST54707 Hippocampus I Homo sapiens cDNA 5... 513 e-143
 AA551799, AA551799 nk04a11.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 363 4e-98
 AA327309, AA327309 EST30621 Colon I Homo sapiens cDNA 5' end 353 4e-95
 AA344913, AA344913 EST50856 Gall bladder II Homo sapiens cDNA... 337 2e-90
 AA121198, AA121198 zl88g08.r1 Stratagene colon (#937204) Homo... 317 2e-84
 AA121174, AA121174 zl88g08.s1 Stratagene colon (#937204) Homo... 317 2e-84
 AA001561, AA001561 ze46e07.s1 Soares retina N2b4HR Homo sapie... 42 0.18
 AA172158, AA172158 zp29a01.s1 Stratagene neuroepithelium (#93... 40 0.72
 N35888, N35888 yy28b05.s1 Homo sapiens cDNA clone 272529 3'. 40 0.72
 AA877455, AA877455 ob33g01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.72
 AA573297, AA573297 nk98d09.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.72
 AA040802, AA040802 zf07g05.s1 Soares fetal heart NbHH19W Homo... 40 0.72
 R02514, R02514 ye70b08.r1 Homo sapiens cDNA clone 123063 5'. 40 0.72
 AA514777, AA514777 ni24b01.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 40 0.72
 AA041240, AA041240 zf07g05.r1 Soares fetal heart NbHH19W Homo... 40 0.72
 AA888147, AA888147 04h11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.72
 AA039536, AA039536 zk39h10.s1 Soares pregnant uterus NbHPU Ho... 40 0.72
 AA416734, AA416734 zu08c01.s1 Soares testis NHT Homo sapiens ... 38 2.8
 N25839, N25839 yx22e05.r1 Homo sapiens cDNA clone 262496 5'. 38 2.8
 AA431486, AA431486 zw72g01.s1 Soares testis NHT Homo sapiens ... 38 2.8
 N98472, N98472 yy65a04.r1 Homo sapiens cDNA clone 278382 5'. 38 2.8
 AA416815, AA416815 zu08c01.r1 Soares testis NHT Homo sapiens ... 38 2.8
 AA852281, AA852281 NHTBCae11g05r1 Normal Human Trabecular Bon... 38 2.8
 AA948291, AA948291 oq34d02.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 38 2.8

AA616807, AA616807 vn68c05.r1 Barstead mouse irradiated colon... 180 1e-43
 AA185487, AA185487 mt62c07.r1 Soares 2NbMT Mus musculus cDNA ... 40 0.26
 AA276740, AA276740 vc42a12.r1 Soares mouse 3NbMS Mus musculus... 40 0.26
 AA469884, AA469884 vf71g10.r1 Barstead mouse pooled organs MP... 40 0.26
 AA230758, AA230758 my32g10.r1 Barstead mouse pooled organs MP... 40 0.26
 AA038869, AA038869 mi95b10.r1 Soares mouse p3NMF19.5 Mus musc... 40 0.26
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 AA763419, AA763419 vw54a12.r1 Soares mouse mammary gland NMLM... 40 0.26
 AA139459, AA139459 mq86a03.r1 Stratagene mouse melanoma (#937... 38 1.0
 AA068686, AA068686 mm59a03.r1 Stratagene mouse embryonic carc... 38 1.0
 AA218431, AA218431 my07e05.r1 Barstead mouse lung MPLRB2 Mus ... 36 4.0
 AI047077, AI047077 uh61g06.r1 Soares mouse embryonic stem cel... 36 4.0
 C87249, C87249 Mus musculus fertilized egg cDNA 3'-end seque... 36 4.0
 AI035925, AI035925 ub49e05.r1 Soares mouse mammary gland NbMM... 36 4.0
 AA111190, AA111190 mp66b11.r1 Soares 2NbMT Mus musculus cDNA ... 36 4.0
 AA645119, AA645119 vs72d03.r1 Stratagene mouse skin (#937313)... 36 4.0
 AA530735, AA530735 vj32g11.r1 Stratagene mouse diaphragm (#93... 36 4.0

AA000268, AA000268 mg32e09.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA793845, AA793845 vr35e12.r1 Barstead mouse myotubes MPLRB5 ... 36 4.0
AA840087, AA840087 uc99h12.r1 Soares mouse uterus NMPu Mus mu... 36 4.0
AA711873, AA711873 vu28e06.r1 Barstead mouse myotubes MPLRB5 ... 36 4.0
AA790448, AA790448 vw04f09.r1 Soares mouse mammary gland NbMM... 36 4.0
AA106301, AA106301 ml81a09.r1 Stratagene mouse kidney (#93731... 36 4.0
AA543280, AA543280 vj80h05.r1 Soares mouse mammary gland NbMM... 36 4.0
AA007762, AA007762 mg76b03.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA921560, AA921560 vy52c06.r1 Stratagene mouse lung 937302 Mu... 36 4.0
AA692425, AA692425 vt59b05.r1 Barstead mouse irradiated colon... 36 4.0
AA833479, AA833479 uc91c03.r1 Soares mouse uterus NMPu Mus mu... 36 4.0
AA824205, AA824205 vy20g08.r1 Stratagene mouse macrophage (#9... 36 4.0
AA033481, AA033481 mi42b07.r1 Soares mouse embryo NbME13.5 14... 36 4.0
W61547, W61547 md57a02.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
AA796056, AA796056 vo65d01.r1 Soares mouse mammary gland NbMM... 36 4.0
AA467482, AA467482 ve01a10.r1 Soares mouse NbMH Mus musculus ... 36 4.0
AA239210, AA239210 mx89e02.r1 Soares mouse NML Mus musculus c... 36 4.0
AA881111, AA881111 vz06e09.r1 Soares mouse mammary gland NbMM... 36 4.0
AA542324, AA542324 vk53e07.r1 Stratagene mouse Tcell 937311 M... 36 4.0
AA089210, AA089210 mo05d10.r1 Stratagene mouse lung 937302 Mu... 36 4.0
W77724, W77724 me84h06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
AI048515, AI048515 uh61e08.r1 Soares mouse embryonic stem cel... 36 4.0
AA009071, AA009071 mg87b11.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA475425, AA475425 vh20g09.r1 Soares mouse mammary gland NbMM... 36 4.0
AA230661, AA230661 mw15f08.r1 Soares mouse 3NME12 5 Mus muscu... 36 4.0
AA138067, AA138067 mq37c11.r1 Barstead MPLRB1 Mus musculus cD... 36 4.0
W83172, W83172 mf09a06.r1 Soares mouse p3NMF19.5 Mus musculus... 36 4.0
AA797372, AA797372 vw27b08.r1 Soares mouse mammary gland NbMM... 36 4.0
AA711859, AA711859 vu59c10.r1 Soares mouse mammary gland NbMM... 36 4.0
AA967316, AA967316 vj47a03.r1 Stratagene mouse skin (#937313)... 36 4.0
W87202, W87202 mf55g08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
AA103139, AA103139 mo17f05.r1 Life Tech mouse embryo 13 5dpc ... 36 4.0
AA014223, AA014223 mh20a03.r1 Soares mouse placenta 4NbMP13.5... 36 4.0
W62989, W62989 md88h12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.0
W20935, W20935 mb96c07.r1 Soares mouse p3NMF19.5 Mus musculus... 36 4.0
AA966976, AA966976 ua38f11.r1 Soares mouse mammary gland NbMM... 36 4.0
AA856298, AA856298 vw99b01.r1 Soares 2NbMT Mus musculus cDNA ... 36 4.0
AA014768, AA014768 mi66h04.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA497479, AA497479 vh29b12.r1 Soares mouse mammary gland NbMM... 36 4.0
AA049011, AA049011 mj48c09.r1 Soares mouse embryo NbME13.5 14... 36 4.0
AA016868, AA016868 mh36e12.r1 Soares mouse placenta 4NbMP13.5... 36 4.0
AI047609, AI047609 uh63g07.r1 Soares mouse embryonic stem cel... 36 4.0
AA591243, AA591243 vm18c04.r1 Knowles Solter mouse blastocyst... 36 4.0

AA957268, AA957268 UI-R-E1-fq-e-06-0-UI.s1 UI-R-E1 Rattus nor... 42 0.058
T00613, T00613 wEST01334 Caenorhabditis elegans cDNA clone CE... 38 0.90
AA956139, AA956139 UI-R-E1-fi-h-08-0-UI.s1 UI-R-E1 Rattus nor... 38 0.90
AA660819, AA660819 00713 MtRHE Medicago truncatula cDNA 5' 38 0.90
AA125602, AA125602 JM00M011.QM3 Miracidia Sjc 3/96 Schistosom... 36 3.6
Z33974, ATTS3035 A. thaliana transcribed sequence; clone PAP... 36 3.6
C68472, C68472 C.elegans cDNA clone yk305a12 : 5' end, singl... 36 3.6
AA785775, AA785775 h4b05a1.f1 Aspergillus nidulans 24hr asexu... 36 3.6
Z32602, ATTS2730 A. thaliana transcribed sequence; clone PAP... 36 3.6
AA943364, AA943364 EST198863 Normalized rat brain, Bento Soar... 36 3.6
Z32603, ATTS2731 A. thaliana transcribed sequence; clone PAP... 36 3.6
AA842765, AA842765 M-EST080 Sugarcane mature stalk Saccharum ... 36 3.6
D45997, RICS10346A Rice cDNA, partial sequence (S10346_1A). 36 3.6
AA955567, AA955567 UI-R-E1-fa-a-08-0-UI.s1 UI-R-E1 Rattus nor... 36 3.6
AA800634, AA800634 EST190131 Normalized rat lung, Bento Soare... 36 3.6
AA660859, AA660859 00754 MtRHE Medicago truncatula cDNA 5' si... 36 3.6
AA800635, AA800635 EST190132 Normalized rat lung, Bento Soare... 36 3.6
D46069, RICS10475A Rice cDNA, partial sequence (S10475_1A). 36 3.6
H32878, H32878 EST108396 Rat PC-12 cells. untreated Rattus sp... 36 3.6

SEQ ID NO:553

Z99297, HS262D12 Homo sapiens DNA sequence from PAC 262D12 o... 1963 0.0
Z81540, CEF46B3 Caenorhabditis elegans cosmid F46B3, complet... 40 0.89
U67488, U67488 Methanococcus jannaschii section 30 of 150 of ... 38 3.5
AE000786, AE000786 Borrelia burgdorferi plasmid lp28-2, compl... 38 3.5
L02053, OMMGSHTR1 Ommastrephes sloani glutathione transferase... 38 3.5
AC004521, ATAC004521 Arabidopsis thaliana chromosome II BAC F... 38 3.5
L41250, DROGPDHN Drosophila nebulosa glycerol-3-phosphate deh... 38 3.5
AE000619, HPAE000619 Helicobacter pylori section 97 of 134 of... 38 3.5
U39720, Mycoplasma genitalium ackA, licA, mucB, rpL10, rpL32... 38 3.5
AC004533, HUAC004533 Homo sapiens Chromosome 16 BAC clone CIT... 38 3.5
U62292, HSU62292 Human elastin (ELN) gene, partial cds 38 3.5

HUMAN ESTs

W02630, W02630 za52c02.r1 Soares fetal liver spleen 1NFLS Hom... 1009 0.0
AA557183, AA557183 nl74f12.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 874 0.0
AA761171, AA761171 nz09e11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 866 0.0
AA976975, AA976975 oq26g11.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 854 0.0
AA449515, AA449515 zx06b11.r1 Soares total fetus Nb2HF8 9w Ho... 848 0.0

AA678392, AA678392 zi26h10.s1 Soares fetal liver spleen 1NFLS... 848 0.0
AA909198, AA909198 ol12d06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 831 0.0
W79208, W79208 zd79g05.r1 Soares fetal heart NbHH19W Homo sap... 813 0.0
W03125, W03125 za53c02.r1 Soares fetal liver spleen 1NFLS Hom... 807 0.0
W94750, W94750 ze13h08.r1 Soares fetal heart NbHH19W Homo sap... 785 0.0
AA354894, AA354894 EST63217 Jurkat T-cells V Homo sapiens cDN... 771 0.0
H70075, H70075 yr92b03.r1 Homo sapiens cDNA clone 212717 5'. 745 0.0
W77859, W77859 zd70b08.r1 Soares fetal heart NbHH19W Homo sap... 728 0.0
AA425424, AA425424 zw48f03.s1 Soares total fetus Nb2HF8 9w Ho... 718 0.0
AA476893, AA476893 zu29f09.r1 Soares ovary tumor NbHOT Homo s... 688 0.0
AA456676, AA456676 aa01h02.s1 Soares NhHMPu S1 Homo sapiens c... 688 0.0
AA662309, AA662309 nu97c11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 668 0.0
W72135, W72135 zd70b08.s1 Soares fetal heart NbHH19W Homo sap... 650 0.0
N74362, N74362 za52c02.s1 Homo sapiens cDNA clone 296162 3'. 622 e-176
N66917, N66917 za47d09.s1 Homo sapiens cDNA clone 295697 3'. 585 e-165
AA251287, AA251287 zs04c06.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 583 e-164
AA971082, AA971082 op70h01.s1 Soares_NFL_T_GBC_S1 Homo sapien... 567 e-160
W78165, W78165 zd79g05.s1 Soares fetal heart NbHH19W Homo sap... 565 e-159
AA253290, AA253290 zr71g03.r1 Soares NhHMPu S1 Homo sapiens c... 559 e-157
AA729063, AA729063 nw22f08.s1 NCI_CGAP_GCB0 Homo sapiens cDNA... 557 e-157
AA987313, AA987313 or81h06.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 553 e-155
AA300954, AA300954 EST13832 Testis tumor Homo sapiens cDNA 5'... 541 e-152
AA425594, AA425594 zw48f03.r1 Soares total fetus Nb2HF8 9w Ho... 529 e-148
N24014, N24014 yx87g10.s1 Homo sapiens cDNA clone 268770 3'. 523 e-146
AA947355, AA947355 od86e12.s1 NCI_CGAP_Ov2 Homo sapiens cDNA ... 504 e-140
AA121074, AA121074 zl88b06.s1 Stratagene colon (#937204) Homo... 460 e-127
AA742964, AA742964 ny15d01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 454 e-126
AA306814, AA306814 EST177885 Colon carcinoma (HCC) cell line ... 452 e-125
W87699, W87699 zh65b11.r1 Soares fetal liver spleen 1NFLS S1 ... 446 e-123
W87700, W87700 zh65b11.s1 Soares fetal liver spleen 1NFLS S1 ... 438 e-121
AA449084, AA449084 zx06b11.s1 Soares total fetus Nb2HF8 9w Ho... 398 e-109
N99231, N99231 zb76f11.s1 Soares senescent fibroblasts NbHSF ... 391 e-106
N49900, N49900 yv24d04.s1 Homo sapiens cDNA clone 243655 3'. 383 e-104
AA782911, AA782911 ai62a10.s1 Soares testis NHT Homo sapiens ... 365 6e-99
AA936553, AA936553 on23g11.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 361 9e-98
N74414, N74414 za53c02.s1 Homo sapiens cDNA clone 296258 3'. 353 2e-95
AA834628, AA834628 od98a10.s1 NCI_CGAP_Ov2 Homo sapiens cDNA ... 341 8e-92
AA693756, AA693756 zi55f11.s1 Soares fetal liver spleen 1NFLS... 341 8e-92
AA909616, AA909616 ol09d06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 341 8e-92
H69662, H69662 yr92b03.s1 Homo sapiens cDNA clone 212717 3'. 321 8e-86
AA249558, AA249558 jj7521.seq.F Human fetal heart, Lambda ZAP... 317 1e-84
AA911960, AA911960 oh88g08.s1 NCI_CGAP_Co8 Homo sapiens cDNA ... 317 1e-84
AA969099, AA969099 op55e06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 303 2e-80
AA766191, AA766191 oa12g08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 212 5e-53
AA689312, AA689312 nx05e10.s1 NCI_CGAP_GC3 Homo sapiens cDNA ... 200 2e-49

AA418586, AA418586 zv93e05.r1 Soares NhHMPu S1 Homo sapiens c... 182 5e-44
 AA418570, AA418570 zv93e05.s1 Soares NhHMPu S1 Homo sapiens c... 182 5e-44
 AA534939, AA534939 nf82f03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 167 3e-39
 AA888430, AA888430 nw74e05.s1 NCI_CGAP_Pr12 Homo sapiens cDNA... 167 3e-39
 N50003, N50003 yv24d04.r1 Homo sapiens cDNA clone 243655 5' s... 149 6e-34
 AA535102, AA535102 nf84f06.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 135 1e-29
 AA262335, AA262335 zr71g03.s1 Soares NhHMPu S1 Homo sapiens c... 129 6e-28
 AA766681, AA766681 oa34c05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 105 9e-21
 AA761492, AA761492 nz27a05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 101 1e-19
 AA688350, AA688350 nv15a05.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 90 5e-16
 AA347041, AA347041 EST53285 Fetal heart II Homo sapiens cDNA ... 76 8e-12
 T94395, T94395 ye35e02.s1 Homo sapiens cDNA clone 119738 3'. 46 0.007
 AA833565, AA833565 aj46a02.s1 Soares testis NHT Homo sapiens ... 46 0.007
 AA095460, AA095460 l4630.seq.F Fetal heart, Lambda ZAP Expres... 40 0.43
 AA904415, AA904415 ok07e06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 40 0.43
 AI018800, AI018800 ov32h04.x1 Soares_testis_NHT Homo sapiens ... 38 1.7
 AA631083, AA631083 nq77e07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 1.7

AA399772, AA399772 vd70g05.r1 Beddington mouse embryonic regi... 347 5e-94
 AA467106, AA467106 vd98b04.r1 Soares mouse NbMH Mus musculus ... 309 1e-82
 AI046844, AI046844 uh55c11.r1 Soares mouse embryonic stem cel... 208 3e-52
 AA475075, AA475075 vh11g05.r1 Soares mouse mammary gland NbMM... 194 4e-48
 AA646094, AA646094 vs31e06.r1 Stratagene mouse Tcell 937311 M... 186 1e-45
 AA390020, AA390020 vb30e07.r1 Soares mouse lymph node NbMLN M... 170 6e-41
 AA245553, AA245553 my52g04.r1 Barstead mouse pooled organs MP... 170 6e-41
 AA930741, AA930741 vs57b02.r1 Stratagene mouse skin (#937313)... 155 4e-36
 W62610, W62610 md58c06.r1 Soares mouse embryo NbME13.5 14.5 M... 117 8e-25
 AA239270, AA239270 my40e01.r1 Barstead mouse pooled organs MP... 109 2e-22
 AA015148, AA015148 mh16e01.r1 Soares mouse placenta 4NbMP13.5... 54 1e-05
 AA764095, AA764095 vw09h02.r1 Soares 2NbMT Mus musculus cDNA ... 38 0.61
 AA238570, AA238570 my35h02.r1 Barstead mouse pooled organs MP... 38 0.61
 AA600576, AA600576 vm75f08.r1 Knowles Solter mouse blastocyst... 38 0.61
 AA636273, AA636273 vq76a10.s1 Knowles Solter mouse 2 cell Mus... 36 2.4
 AA051407, AA051407 mj41f08.r1 Soares mouse embryo NbME13.5 14... 36 2.4
 AA823136, AA823136 vw41b03.r1 Soares mouse mammary gland NbMM... 36 2.4
 W83831, W83831 mf26a06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 2.4
 D77944, MUSC0D06 Mouse embryonal carcinoma F9 cell cDNA, C0D06 36 2.4
 AA915408, AA915408 vz29h04.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.4
 AI047229, AI047229 uh63a09.r1 Soares mouse embryonic stem cel... 36 2.4
 AA271880, AA271880 va73d01.r1 Soares mouse 3NME12 5 Mus muscu... 36 2.4
 AA475165, AA475165 vg95f01.r1 Barstead mouse pooled organs MP... 36 2.4
 AA619774, AA619774 vl58a05.s1 Knowles Solter mouse 2 cell Mus... 36 2.4

AA673116, AA673116 vn49g11.r1 Barstead mouse myotubes MPLRB5 ... 36 2.4
 AA870623, AA870623 vq24a07.r1 Barstead stromal cell line MPLR... 36 2.4
 W58907, W58907 md52f12.r1 Soares mouse embryo NbME13.5 14.5 M... 36 2.4
 AA690593, AA690593 vu53d05.r1 Soares mouse mammary gland NbMM... 36 2.4
 AA754801, AA754801 vu21f03.r1 Barstead mouse myotubes MPLRB5 ... 36 2.4
 AA271607, AA271607 va72a12.r1 Soares mouse 3NME12 5 Mus muscu... 36 2.4
 AA064256, AA064256 mj66a03.r1 Soares mouse p3NMF19.5 Mus musc... 36 2.4
 AA475144, AA475144 vg95d01.r1 Barstead mouse pooled organs MP... 36 2.4
 AA197736, AA197736 mv02g08.r1 GuayWoodford Beier mouse kidney... 36 2.4

AA817944, AA817944 UI-R-A0-ag-e-01-0-UI.s1 UI-R-A0 Rattus nor... 40 0.14
 F14714, SSC8B01 S.scrofa mRNA; expressed sequence tag (5'; c... 38 0.54
 H91505, H91505 SWMFA089SK Brugia malayi microfilaria cDNA (S... 36 2.1
 AA998610, AA998610 UI-R-C0-if-c-04-0-UI.s1 UI-R-C0 Rattus nor... 36 2.1
 AA893562, AA893562 EST197365 Normalized rat liver, Bento Soar... 36 2.1
 AI008397, AI008397 EST202848 Normalized rat embryo, Bento Soa... 36 2.1

SEQ ID NO:554

Z92544, HS313D11 Human DNA sequence from cosmid 313D11 from ... 700 0.0
 Z46940, HSPRMTNP2 H.sapiens PRM1 gene, PRM2 gene and TNP2 gene 44 0.048
 U85039, TMU85039 Theileria mutans 32 kDa immunodominant pirop... 42 0.19
 U85251, TMU85251 Theileria mutans 32 kDa immunodominant pirop... 42 0.19
 AF003630, AF003630 Theileria mutans clone 15, 32 kDa immunodo... 42 0.19
 AF003629, AF003629 Theileria mutans clone 9, 32 kDa immunodom... 42 0.19
 AB007884, AB007884 Homo sapiens KIAA0424 mRNA, partial cds 42 0.19
 U85040, TMU85040 Theileria mutans 32 kDa immunodominant pirop... 42 0.19
 Z97343, ATFCA8 Arabidopsis thaliana DNA chromosome 4, ESSA I... 40 0.75
 L19655, TOSRNA1X Tomato ringspot virus polypeptide (RNA-1) ge... 40 0.75
 M73822, TOSRNA1A Tomato ringspot virus RNA1 gene, 5' end. 40 0.75
 L02543, BOVMTNNT Bos taurus nicotinamide nucleotide transhydr... 40 0.75
 J03534, BOVNAD Bovine mitochondrial nicotinamide nucleotide t... 40 0.75
 M62862, TRBRTE Trypanosoma cruzi retrotransposon encoding gag... 40 0.75
 X72711, MMREPCFC M.musculus mRNA for replication factor C, l... 38 3.0
 M88489, MUSNBP Mus musculus nonamer binding protein mRNA, com... 38 3.0
 U36441, MMU36441 Mus musculus differentiation specific elemen... 38 3.0
 AB002354, AB002354 Human mRNA for KIAA0356 gene, complete cds 38 3.0
 J03149, CATFMS Cat (F.domesticus) c-fms proto-oncogene mRNA ... 38 3.0
 J05475, CHKVICOLL Chicken type VI collagen alpha 2 (VI) subun... 38 3.0

AF038163, AF038163 *Homo sapiens* interleukin-15 (IL-15) gene, ... 38 3.0
 X75917, HSFBMBF *H.sapiens* mRNA for fetal beta-MHC binding fa... 38 3.0
 X06542, DMHSPG3 *Drosophila* heat shock gene 3 from 67B locus 38 3.0
 D17315, DRODAGK Fruit fly mRNA for diacylglycerol kinase, co... 38 3.0
 Z58600, HS45E3F *H.sapiens* CpG DNA, clone 45e3, forward read ... 38 3.0
 D78638, D78638 *Xenopus laevis* mRNA for DNA (cytosine-5-)-met... 38 3.0
 Z49204, MMNADPTRH *M.musculus* mRNA for NADP transhydrogenase. 38 3.0
 L10425, BPEMETC *Bordetella avium* beta-cystathionase-lyase (me... 38 3.0
 U01222, U01222 *Mus musculus* activator 1 large subunit (A1-p14... 38 3.0
 U15037, MMU15037 *Mus musculus* replication factor C large subu... 38 3.0
 K01643, FCSSMONC Feline sarcoma virus (McDonough strain) tran... 38 3.0
 Z57538, HS183C6F *H.sapiens* CpG DNA, clone 183c6, forward rea... 38 3.0
 U07157, MMU07157 *Mus musculus* ISRE-binding protein (IBF-1) mR... 38 3.0
 Z64961, HS183F7R *H.sapiens* CpG DNA, clone 183f7, reverse rea... 38 3.0

HUMAN ESTs

SEQ ID NO:555

AF039693, AF039693 *Homo sapiens* unknown protein mRNA, complet... 916 0.0
 S51239, S51239 calreticulin [*Aplysia californica*=marine snail... 48 0.005
 Z74035, CEF47G9 *Caenorhabditis elegans* cosmid F47G9, complet... 46 0.019
 AF022814, AF022814 *Fugu rubripes* transcription factor (SLP-1)... 44 0.073
 X82638, CSCYTOX *C.sordelii* cytotoxin gene 42 0.29
 U63063, SCU63063 *Saccharomyces cerevisiae* something about sil... 42 0.29
 X63501, SCRPC53 *S.cerevisiae* RPC53 gene for RNA polymerase C... 42 0.29
 U67572, U67572 *Methanococcus jannaschii* section 114 of 150 of... 42 0.29
 Z74201, SCYDL153C *S.cerevisiae* chromosome IV reading frame O... 42 0.29
 U66032, MTU66032 *Methanosarcina thermophila* CO dehydrogenase/... 42 0.29
 Z95620, SPBC3D6 *S.pombe* chromosome II cosmid c3D6 42 0.29
 X97751, SCIV23 *S.cerevisiae* chrIV genes STE7, CLB3, MSH5, RP... 42 0.29
 X65541, ATCAN *A.thaliana* mRNA for carbonic anhydrase 42 0.29
 L14750, ATHCARANHY *Arabidopsis thaliana* carbonic anhydrase ge... 42 0.29
 U00995, U00995 *Rattus norvegicus* TA1 mRNA, complete cds. 40 1.1
 S73876, S73876 FPR3=FKBP-70 [*Saccharomyces cerevisiae*, Genomi... 40 1.1
 U12825, SCU12825 *Saccharomyces cerevisiae* transcription facto... 40 1.1
 Z74237, SCYDL189W *S.cerevisiae* chromosome IV reading frame O... 40 1.1
 U76906, REU76906 *Rhizobium etli* FixK (fixK), FixN (fixN), mon... 40 1.1

- AF050157, MMHC135G15 *Mus musculus* major histocompatibility lo... 40 1.1
- X58857, SCPFH22 *S.cerevisiae* PPH22 gene for protein phosphat... 40 1.1
- X79379, SCPROIS *S.cerevisiae* gene for proline isomerase 40 1.1
- Z68341, CEF01G4 *Caenorhabditis elegans* cosmid F01G4, complet... 40 1.1
- M17192, MUSHOX1 Mouse homeodomain protein (Hox1.1) mRNA, comp... 40 1.1
- U50307, CELF43H9 *Caenorhabditis elegans* cosmid F43H9. 40 1.1
- S73144, S73144 bone sialoprotein [cattle, fetal bone cells, m... 40 1.1
- L34569, YSCFPR3A *Saccharomyces cerevisiae* (clone pBYNG1) prol... 40 1.1
- D78303, D78303 *Rattus norvegicus* YT521 mRNA for RNA splicing... 40 1.1
- X83276, SCDNAIV *S.cerevisiae* DNA for ORFs from chromosome IV 40 1.1
- U54558, HSU54558 Human translation initiation factor eIF3 p66... 40 1.1
- Z50109, CEC09H10 *Caenorhabditis elegans* cosmid C09H10, compl... 40 1.1
- X56983, EAVATP1 *E.arvense* gene for catalytic 70kDa V-ATPase ... 40 1.1
- AB011125, AB011125 *Homo sapiens* mRNA for KIAA0553 protein, p... 40 1.1
- Z46373, SC8248 *S.cerevisiae* chromosome XIII cosmid 8248 40 1.1
- AF039042, CELZK697 *Caenorhabditis elegans* cosmid ZK697 40 1.1
- Z28028, SCYKL028W *S.cerevisiae* chromosome XI reading frame O... 40 1.1
- AC005266, AC005266 *Homo sapiens* chromosome 19, cosmid F23465,... 38 4.5
- U60822, HSU60822 Human dystrophin (DMD) gene, exons 7, 8 and ... 38 4.5
- AJ003141, HVAJ3141 *Hordeum vulgare* mRNA for stress-related p... 38 4.5
- M26250, CRAGAP43 Goldfish (*C.auratus*) growth-associated prote... 38 4.5
- X95267, GGRRY3 *G.gallus* mRNA for ryanodine receptor type 3 38 4.5
- L37092, MUSCDPK *Mus musculus* cyclin-dependent kinase homologue... 38 4.5
- Z72507, CEF17C11 *Caenorhabditis elegans* cosmid F17C11, compl... 38 4.5
- U29608, DMU29608 *Drosophila melanogaster* large tumor suppress... 38 4.5
- Z49072, CET24A11 *Caenorhabditis elegans* cosmid T24A11, compl... 38 4.5
- M83142, RATBGASTR *Rattus norvegicus* beta-galactoside-alpha 2.... 38 4.5
- Z20656, HSCAMHCA *Homo sapiens* of cardiac alpha-myosin heavy ... 38 4.5
- M82937, YSACS2A *Candida albicans* chitin synthase 2 (CHS2) gen... 38 4.5
- U28888, MMU28888 *Mus musculus* neurogenic differentiation fact... 38 4.5
- S66408, S66408 c-erbB=proto-oncogene {exon 1, promoter} [chic... 38 4.5
- AC002396, AC002396 *Arabidopsis thaliana* chromosome I BAC F316... 38 4.5
- AE000665, MMAE000665 *Mus musculus* TCR beta locus from bases 5... 38 4.5
- L39837, DROWARTS *Drosophila melanogaster* tumor supressor (war... 38 4.5
- AG000377, AG000377 *Homo sapiens* genomic DNA, 21q region, clo... 38 4.5
- X05632, HSMHCAG1 Human alpha-MHC gene for myosin heavy chain... 38 4.5
- AC002108, AC002108 Genomic sequence from Mouse 4, complete se... 38 4.5
- U37219, HSU37219 Human cyclophilin-like protein CyP-60 mRNA, ... 38 4.5
- M58633, MUSP58GTA Mouse p58/GTA protein kinase mRNA, complete... 38 4.5
- M25162, HUMMYHC08 Human cardiac alpha-myosin heavy chain (MYH... 38 4.5
- Z46259, SCRPD3COS *S.cerevisiae* FY1676 RPD3 gene. 38 4.5
- U09558, LJU09558 *Lactobacillus johnsonii* ATCC 11506 insertion... 38 4.5
- U66160, MMUSC104 *Mus musculus* extracellular matrix associated... 38 4.5
- Z73126, SCYLL021W *S.cerevisiae* chromosome XII reading frame ... 38 4.5
- U83981, HSU83981 *Homo sapiens* apoptosis associated protein (G... 38 4.5

U59897, MRU59897 *Macropus robustus* hypoxanthine phosphoribosy... 38 4.5
 D38256, YSCSCT1 Yeast gene for suppressor of ctr mutation 38 4.5
 X69838, HSG9A *H.sapiens* mRNA for G9a 38 4.5
 X52952, RNCMOSO Rat mRNA for c-mos 38 4.5
 U37221, HSU37221 Human cyclophilin-like protein mRNA, partial... 38 4.5
 X65880, DPRH4OP1 *D.pseudoobscura* rh4 opsin gene, exon 1 38 4.5
 U58971, NTU58971 *Nicotiana tabacum* calmodulin-binding protein... 38 4.5
 Z35773, SCYBL012C *S.cerevisiae* chromosome II reading frame O... 38 4.5
 X67668, MMHMG2 *M.musculus* mRNA for high mobility group 2 pro... 38 4.5
 L81727, HSL81727 *Homo sapiens* (subclone 1_d5 from P1 H69) DNA... 38 4.5
 AL023800, HS833B2 Human DNA sequence *** SEQUENCING IN PROGR... 38 4.5
 X62438, HVPERO *H.vulgare* mRNA for peroxidase 38 4.5
 AC004096, AC004096 Mouse Cosmid ma66a100 from 14D1-D2, comple... 38 4.5
 AL008980, PFSC03050 *Plasmodium falciparum* DNA *** SEQUENCING... 38 4.5
 U64827, MMU64827 *Mus musculus* extracellular matrix associated... 38 4.5
 AC003010, HUAC003010 *Homo sapiens* Chromosome 16 BAC clone CIT... 38 4.5
 AE001002, AE001002 *Archaeoglobus fulgidus* section 105 of 172 ... 38 4.5
 U86662, LEU86662 *Lycopersicon esculentum* VPS41 (tVPS41) mRNA,... 38 4.5
 M20386, CHKEGFR Chicken epidermal growth factor receptor (CER... 38 4.5
 M77637, CHKEGF *Gallus gallus* EGF/TGF-alpha receptor (c-erbB) ... 38 4.5
 U08185, MMU08185 *Mus musculus* BALB/c zinc-finger protein Blim... 38 4.5
 AC004231, AC004231 *Homo sapiens* chromosome 17, clone hRPC.111... 38 4.5
 Z50100, HVC39SAT *H.vulgare* GAA-satellite DNA 38 4.5
 X53731, SCSPA2G *S. cerevisiae* SPA2 gene 38 4.5
 U37220, HSU37220 Human cyclophilin-like protein mRNA, partial... 38 4.5
 X97560, SC32KBF *S.cerevisiae* 32kb DNA fragment of chromosome... 38 4.5
 AB011479, AB011479 *Arabidopsis thaliana* genomic DNA, chromos... 38 4.5
 U89340, LVU89340 *Lytechinus variegatus* Endo16 homolog (LvEndo1... 38 4.5
 U73850, TCU73850 *Trypanosoma cruzi* 29 kDa proteasome subunit ... 38 4.5
 AB006698, AB006698 *Arabidopsis thaliana* genomic DNA, chromos... 38 4.5
 D37888, CYIMYC2 *Cyprinus carpio* c-myc gene for c-Myc, comple... 38 4.5
 AF017349, MMDSGIII 7 *Mus musculus* desmoglein 3 (Dsg3) gene, i... 38 4.5
 X91807, OSTA136 *O.sativa* mRNA for alpha-tubulin (clone OSTA-... 38 4.5
 Z71587, SCYNL311C *S.cerevisiae* chromosome XIV reading frame ... 38 4.5
 AE000742, AE000742 *Aquifex aeolicus* section 74 of 109 of the ... 38 4.5

HUMAN ESTs

AA324311, AA324311 EST27136 Cerebellum II *Homo sapiens* cDNA 5... 593 e-167
 AA639190, AA639190 ns04a01.r1 NCI_CGAP_Ew1 *Homo sapiens* cDNA ... 513 e-143
 AA172199, AA172199 zo96a06.r1 Stratagene ovarian cancer (#937... 505 e-141
 AA588066, AA588066 nk10d08.s1 NCI_CGAP_Co2 *Homo sapiens* cDNA ... 502 e-140
 AA412036, AA412036 zt68d09.s1 Soares testis NHT *Homo sapiens* ... 502 e-140
 AA508745, AA508745 ni23a03.s1 NCI_CGAP_Co4 *Homo sapiens* cDNA ... 502 e-140

AA480337, AA480337 ne33a03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 502 e-140
 AA902270, AA902270 ok69e04.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 502 e-140
 AA947303, AA947303 ok20d04.s1 Soares_NSF_F8_9W_OT_PA_P_S1 Hom... 502 e-140
 R23642, R23642 yh35e03.r1 Homo sapiens cDNA clone 131740 5' ... 490 e-136
 AA811913, AA811913 ob51d06.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 464 e-128
 AA172083, AA172083 zo96a06.s1 Stratagene ovarian cancer (#937... 464 e-128
 AA725458, AA725458 ai16g01.s1 Soares parathyroid tumor NbHPA ... 400 e-109
 R26558, R26558 yh35e02.s1 Homo sapiens cDNA clone 131738 3' ... 359 5e-97
 AA402403, AA402403 zt68d09.r1 Soares testis NHT Homo sapiens ... 315 6e-84
 R58372, R58372 G3243 Fetal heart Homo sapiens cDNA clone G324... 262 8e-68
 AA389703, AA389703 M421 Fetal heart, Lambda ZAP Express Homo ... 202 6e-50
 W25749, W25749 11b4 Human retina cDNA randomly primed sublibr... 103 4e-20
 W27158, W27158 22h9 Human retina cDNA randomly primed sublibr... 66 1e-08
 T65784, T65784 yc11f10.s1 Homo sapiens cDNA clone 80395 3' si... 42 0.14
 AA179601, AA179601 zp49f10.r1 Stratagene HeLa cell s3 937216 ... 42 0.14
 AA928679, AA928679 on48e08.s1 NCI_CGAP_Co8 Homo sapiens cDNA ... 40 0.55
 AA887972, AA887972 nq95g11.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.55
 W46946, W46946 zc40c05.s1 Soares senescent fibroblasts NbHSF ... 40 0.55
 AA887862, AA887862 nq99b08.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 40 0.55
 AA554819, AA554819 ni34d08.s1 NCI_CGAP_Lu1 Homo sapiens cDNA ... 40 0.55
 AA557362, AA557362 nl81d12.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
 AA252258, AA252258 zr29e04.s1 Stratagene NT2 neuronal precurs... 40 0.55
 N34310, N34310 yy52b10.s1 Homo sapiens cDNA clone 277147 3' s... 40 0.55
 AA552228, AA552228 nk06b04.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 40 0.55
 AI017648, AI017648 ou99b02.x1 NCI_CGAP_Kid3 Homo sapiens cDNA... 40 0.55
 T17395, T17395 NIB846 Normalized infant brain, Bento Soares H... 40 0.55
 AA219659, AA219659 zr05e10.s1 Stratagene NT2 neuronal precurs... 40 0.55
 AA463841, AA463841 zx67f06.r1 Soares total fetus Nb2HF8 9w Ho... 40 0.55
 N66817, N66817 za09b11.s1 Homo sapiens cDNA clone 292029 3' s... 40 0.55
 AA167358, AA167358 zp06f12.s1 Stratagene ovarian cancer (#937... 40 0.55
 AA063505, AA063505 zf70d02.r1 Soares pineal gland N3HPG Homo ... 40 0.55
 AA731625, AA731625 nw64a04.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.55
 AA100119, AA100119 zl80g04.s1 Stratagene colon (#937204) Homo... 40 0.55
 AA181572, AA181572 zp51d04.s1 Stratagene HeLa cell s3 937216 ... 40 0.55
 AA327182, AA327182 EST30459 Colon I Homo sapiens cDNA 5' end ... 40 0.55
 R48608, R48608 yj65f07.s1 Homo sapiens cDNA clone 153637 3' s... 40 0.55
 AA678485, AA678485 ah06e04.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA082353, AA082353 zn38c11.r1 Stratagene endothelial cell 937... 40 0.55
 AA633213, AA633213 nq57c06.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 40 0.55
 W38410, W38410 zc77g09.s1 Pancreatic Islet Homo sapiens cDNA ... 40 0.55
 AA345893, AA345893 EST51967 Gall bladder I Homo sapiens cDNA ... 40 0.55
 N26876, N26876 yx97f06.s1 Homo sapiens cDNA clone 269699 3' s... 40 0.55
 N95279, N95279 zb60c09.s1 Soares fetal lung NbHL19W Homo sapi... 40 0.55
 AI041637, AI041637 ox92h08.x1 Soares_senescent_fibroblasts_Nb... 40 0.55
 N67830, N67830 za05d12.s1 Homo sapiens cDNA clone 291671 3' s... 40 0.55

AA535094, AA535094 nf84e06.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 AA514414, AA514414 nf57d11.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 T56802, T56802 ya71h07.s2 Homo sapiens cDNA clone 67165 3' co... 40 0.55
 N68147, N68147 yz55f12.s1 Homo sapiens cDNA clone 286991 3' s... 40 0.55
 AA535811, AA535811 nf93g10.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 AA115591, AA115591 zl05g09.s1 Soares pregnant uterus NbHPU Ho... 40 0.55
 N75851, N75851 za96g11.s1 Homo sapiens cDNA clone 300452 3'. 40 0.55
 AA534433, AA534433 nf80a08.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 H99778, H99778 yx36g01.s1 Homo sapiens cDNA clone 263856 3' s... 40 0.55
 AA970859, AA970859 oo81h03.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 40 0.55
 F02131, HSC0PF092 H. sapiens partial cDNA sequence; clone c-... 40 0.55
 AA810279, AA810279 od14g11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.55
 AA595146, AA595146 nl84b01.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
 AA632386, AA632386 np67e06.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
 AA135124, AA135124 zo24c04.s1 Stratagene colon (#937204) Homo... 40 0.55
 AA143500, AA143500 zo31b10.s1 Stratagene colon (#937204) Homo... 40 0.55
 AA854992, AA854992 aj53g12.s1 Soares testis NHT Homo sapiens ... 40 0.55
 AA156872, AA156872 zl20h07.s1 Soares pregnant uterus NbHPU Ho... 40 0.55
 AA160994, AA160994 zq41c12.s1 Stratagene hNT neuron (#937233)... 40 0.55
 AA961724, AA961724 or60a10.s1 NCI_CGAP_GC3 Homo sapiens cDNA ... 40 0.55
 AA551210, AA551210 nj27e09.s1 NCI_CGAP_AA1 Homo sapiens cDNA ... 40 0.55
 R44103, R44103 yg27c10.s1 Homo sapiens cDNA clone 33636 3'. 40 0.55
 AA938086, AA938086 oj08h08.s1 NCI_CGAP_Mel3 Homo sapiens cDNA... 40 0.55
 AA576021, AA576021 nm57d11.s1 NCI_CGAP_Br3 Homo sapiens cDNA ... 40 0.55
 AA722725, AA722725 zg86b09.s1 Soares fetal heart NbHH19W Homo... 40 0.55
 AA678948, AA678948 ah08h11.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 W07435, W07435 za96g11.r1 Soares fetal lung NbHL19W Homo sapi... 40 0.55
 T34639, T34639 EST72167 Homo sapiens cDNA 5' end similar to s... 40 0.55
 AA632245, AA632245 np67b09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 40 0.55
 R98701, R98701 yr31f08.s1 Homo sapiens cDNA clone 206919 3'. 40 0.55
 R76418, R76418 yi58a10.s1 Homo sapiens cDNA clone 143418 3'. 40 0.55
 AI028447, AI028447 ow08b09.x1 Soares_parathyroid_tumor_NbHPA ... 40 0.55
 AI002929, AI002929 an15e12.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA779388, AA779388 ae26a03.s1 Soares NbHFB Homo sapiens cDNA ... 40 0.55
 AA776220, AA776220 ah10f02.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA815223, AA815223 oc05c04.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.55
 W60807, W60807 zd27b08.s1 Soares fetal heart NbHH19W Homo sap... 40 0.55
 AA666007, AA666007 ag71g01.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA643849, AA643849 np26f07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 40 0.55
 AA846740, AA846740 aj99b12.s1 Soares parathyroid tumor NbHPA ... 40 0.55
 AA598498, AA598498 ae38h01.s1 Gessler Wilms tumor Homo sapien... 40 0.55
 AA535972, AA535972 nf95a01.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 40 0.55
 AA488544, AA488544 ab37g06.r1 Stratagene HeLa cell s3 937216 ... 40 0.55
 AA866044, AA866044 oh52g07.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.55
 C14370, C14370 Human fetal brain cDNA 5'-end GEN-050F01 40 0.55

AA237204, AA237204 mx18d02.r1 Soares mouse NML Mus musculus c... 167 1e-39
 AA563402, AA563402 vl75d08.r1 Knowles Solter mouse blastocyst... 38 0.78
 AA413261, AA413261 ve52f04.r1 Beddington mouse embryonic regi... 38 0.78
 AA097645, AA097645 mm36f09.r1 Stratagene mouse skin (#937313)... 38 0.78
 AA122578, AA122578 mn25b08.r1 Beddington mouse embryonic regi... 38 0.78
 AA122581, AA122581 mn25c08.r1 Beddington mouse embryonic regi... 38 0.78
 AA646168, AA646168 vn11e06.r1 Stratagene mouse Tcell 937311 M... 36 3.1
 AA200881, AA200881 mu03c09.r1 Soares mouse 3NbMS Mus musculus... 36 3.1
 AI048938, AI048938 uc84h06.y1 Sugano mouse kidney mkia Mus mu... 36 3.1
 AA217675, AA217675 mv01b09.r1 Soares mouse lymph node NbMLN M... 36 3.1
 AI006387, AI006387 ua71d09.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.1
 AA162722, AA162722 mn42b07.r1 Beddington mouse embryonic regi... 36 3.1
 AA207387, AA207387 mv89a11.r1 GuayWoodford Beier mouse kidney... 36 3.1
 AA511382, AA511382 vg14b04.r1 Soares mouse NbMH Mus musculus ... 36 3.1
 AA123112, AA123112 mn30g01.r1 Beddington mouse embryonic regi... 36 3.1
 AA106683, AA106683 ml83h06.r1 Stratagene mouse kidney (#93731... 36 3.1
 AA105882, AA105882 ml84h07.r1 Stratagene mouse kidney (#93731... 36 3.1
 W12171, W12171 ma59a10.r1 Soares mouse p3NMF19.5 Mus musculus... 36 3.1
 AA208446, AA208446 mv85e01.r1 GuayWoodford Beier mouse kidney... 36 3.1
 AA451370, AA451370 vf84h02.r1 Soares mouse mammary gland NbMM... 36 3.1
 AA244639, AA244639 mx02g12.r1 Soares mouse NML Mus musculus c... 36 3.1
 AA267119, AA267119 mz74d07.r1 Soares mouse lymph node NbMLN M... 36 3.1
 AA561847, AA561847 vl27a12.r1 Stratagene mouse Tcell 937311 M... 36 3.1
 AA237313, AA237313 mx17b11.r1 Soares mouse NML Mus musculus c... 36 3.1
 AA145817, AA145817 mq68a12.r1 Soares 2NbMT Mus musculus cDNA ... 36 3.1
 AA052080, AA052080 mf69f12.r1 Soares mouse embryo NbME13.5 14... 36 3.1
 AA000646, AA000646 mg23f09.r1 Soares mouse embryo NbME13.5 14... 36 3.1
 AA510521, AA510521 vh59a05.r1 Soares mouse mammary gland NbMM... 36 3.1
 AI006122, AI006122 ua86h01.r1 Soares mouse mammary gland NbMM... 36 3.1
 AA987039, AA987039 uc74e05.x1 Sugano mouse liver mlia Mus mus... 36 3.1
 W77413, W77413 me64d06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.1
 AA114809, AA114809 mn17e09.r1 Beddington mouse embryonic regi... 36 3.1
 AA793564, AA793564 vn54c05.r1 Barstead mouse myotubes MPLRB5 ... 36 3.1
 AA174537, AA174537 mt10f09.r1 Soares mouse 3NbMS Mus musculus... 36 3.1
 W62181, W62181 md87d08.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.1
 AA272905, AA272905 va39d01.r1 Soares mouse 3NME12 5 Mus muscu... 36 3.1
 AA286005, AA286005 va30e05.r1 GuayWoodford Beier mouse kidney... 36 3.1
 AA212823, AA212823 mw81c07.r1 Soares mouse NML Mus musculus c... 36 3.1
 AA125061, AA125061 mq83d10.r1 Stratagene mouse melanoma (#937... 36 3.1

AA519228, AA519228 TgESTzz39h02.s1 TgME49 invivo Bradyzoite c... 44 0.011

AA520185, AA520185 TgESTzz39d03.s1 TgME49 invivo Bradyzoite c... 44 0.011
 AA531917, AA531917 TgESTzz48f01.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA519997, AA519997 TgESTzz36h03.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA520811, AA520811 TgESTzz64d05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA520866, AA520866 TgESTzz68e05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA519844, AA519844 TgESTzz36c03.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA274295, AA274295 TgESTzz24c11.s1 TgME49 invivo Bradyzoite c... 44 0.011
 AA520901, AA520901 TgESTzz65a05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA519829, AA519829 TgESTzz36a02.r1 TgME49 invivo Bradyzoite c... 44 0.011
 AA531839, AA531839 TgESTzz47h05.r1 TgME49 invivo Bradyzoite c... 44 0.011
 C70525, C70525 *C.elegans* cDNA clone yk409g6 : 5' end, single... 44 0.011
 AA520235, AA520235 TgESTzz53c06.r1 TgME49 invivo Bradyzoite c... 42 0.044
 T42800, T42800 6063 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 42 0.044
 R29976, R29976 12581 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 42 0.044
 H32045, H32045 EST106774 Rat PC-12 cells, untreated *Rattus* sp... 40 0.18
 AA819924, AA819924 MF5MA171.AE3 *S. mansoni* female adult Lambd... 40 0.18
 H37128, H37128 15257 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 40 0.18
 T04367, T04367 414 Lambda-PRL2 *Arabidopsis thaliana* cDNA clon... 40 0.18
 R90528, R90528 16883 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 40 0.18
 AA660422, AA660422 00298 MtRHE *Medicago truncatula* cDNA 5' 40 0.18
 U94861, RRU94861 *Rattus norvegicus* clone HCY3 mRNA sequence 40 0.18
 F14275, ATTS5197 *A. thaliana* transcribed sequence; clone YBY... 38 0.69
 W43730, W43730 23107 CD4-16 *Arabidopsis thaliana* cDNA clone H... 38 0.69
 N65025, N65025 20065 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 38 0.69
 AI001628, AI001628 EST0210 *Tilapia* brain cDNA library in pUC1... 38 0.69
 H74687, H74687 383 *Brassica napus* cDNA clone R25R. 38 0.69
 AA395597, AA395597 27394 Lambda-PRL2 *Arabidopsis thaliana* cDN... 38 0.69
 AA753070, AA753070 97AS2091 Rice Immature Seed Lambda ZAPII c... 38 0.69
 D41274, RICS3647A Rice cDNA, partial sequence (S3647_1A). 38 0.69
 Z25731, ATTS1208 *A. thaliana* transcribed sequence; clone VCV... 38 0.69
 N82780, N82780 TgESTzy34e03.r1 TgRH Tachyzoite cDNA Toxoplasm... 38 0.69
 AA597822, AA597822 29889 Lambda-PRL2 *Arabidopsis thaliana* cDN... 38 0.69
 AA948906, AA948906 LD27590.5prime LD *Drosophila melanogaster* ... 38 0.69
 AI013695, AI013695 EST208370 Normalized rat spleen, Bento Soa... 38 0.69
 AA753263, AA753263 96BS0294 Rice Immature Seed Lambda ZAPII c... 38 0.69
 F14402, ATTS5324 *A. thaliana* transcribed sequence; clone TAP... 36 2.7
 T46158, T46158 9421 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 2.7
 C91400, C91400 *Dictyostelium discoideum* slug cDNA, clone SSK169 36 2.7
 T46009, T46009 9272 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 2.7
 AA440655, AA440655 LD15510.5prime LD *Drosophila melanogaster* ... 36 2.7
 AA559374, AA559374 MU002092.NH3 York-Harrop-lung-A *Schistosom*... 36 2.7
 Z32623, ATTS2751 *A. thaliana* transcribed sequence; clone YAP... 36 2.7
 T43683, T43683 6946 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 2.7
 AA263535, AA263535 LD06645.5prime LD *Drosophila melanogaster* ... 36 2.7
 C37095, C37095 *C.elegans* cDNA clone yk482c11 : 3' end, singl... 36 2.7

C57017, C57017 *C.elegans* cDNA clone yk308h9 : 3' end, single... 36 2.7
 C93857, C93857 *Dictyostelium discoideum* slug cDNA, clone SSL794 36 2.7
 C92242, C92242 *Dictyostelium discoideum* slug cDNA, clone SSD283 36 2.7
 Z33976, ATTS3037 *A. thaliana* transcribed sequence; clone YAP... 36 2.7
 R62091, R62091 EST351 *Strongylocentrotus purpuratus* cDNA 5' end. 36 2.7
 AA567455, AA567455 HL01288.5prime HL *Drosophila melanogaster* ... 36 2.7
 C74456, C74456 Rice cDNA, partial sequence (E31357_1A) 36 2.7
 AA753227, AA753227 97AS2316 Rice Immature Seed Lambda ZAPII c... 36 2.7
 C92456, C92456 *Dictyostelium discoideum* slug cDNA, clone SSE569 36 2.7
 T20458, T20458 2466 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 2.7
 R29905, R29905 12510 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 36 2.7
 M79841, M79841 wEST00378 *Caenorhabditis elegans* cDNA clone CE... 36 2.7
 Z17562, ATTS0136 *A. thaliana* transcribed sequence; clone TAT... 36 2.7
 D71983, CELK084H2R *C.elegans* cDNA clone yk84h2 : 3' end, sin... 36 2.7
 T20404, T20404 2412 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 2.7
 AI012789, AI012789 EST207240 Normalized rat placenta, Bento S... 36 2.7
 U83048, BTU83048 *Bos taurus* clone 0429 mRNA sequence 36 2.7
 AA660182, AA660182 00022 MtrHE *Medicago truncatula* cDNA 5' si... 36 2.7
 D48514, RICS14740A Rice cDNA, partial sequence (S14740_1A). 36 2.7
 C90110, C90110 *Dictyostelium discoideum* slug cDNA, clone SSI103 36 2.7
 H36880, H36880 15009 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 36 2.7
 AA699152, AA699152 HL07807.5prime HL *Drosophila melanogaster* ... 36 2.7
 C11922, C11922 *C.elegans* cDNA clone yk144a11 : 5' end, singl... 36 2.7
 AA816691, AA816691 LD03795.5prime LD *Drosophila melanogaster* ... 36 2.7

SEQ ID NO:556

X99668, MM22A3 *M.musculus* mRNA for exon from unknown gene 22A3 260 5e-67
 Z83760, CICOS41 *Ciona intestinalis* DNA sequence from cosmid ... 40 0.94
 Z75710, CED1081 *Caenorhabditis elegans* cosmid D1081, complet... 40 0.94
 U73628, HSU73628 Human chromosome 11 101h11 cosmid, complete ... 40 0.94
 X99757, DMDYDTRO *D.melanogaster* mRNA for dystrophin 38 3.7
 U51189, HIVU51189 HIV-1 clone 93th253 from Thailand, complete... 38 3.7
 AC004118, AC004118 *Drosophila melanogaster* (P1 DS06238 (D26))... 38 3.7
 U50313, CELF44C4 *Caenorhabditis elegans* cosmid F44C4. 38 3.7
 AC004503, AC004503 *Homo sapiens* chromosome 5, P1 clone 1354A7... 38 3.7
 M16840, WHTCPA2 Wheat Asp-tRNA gene. 38 3.7
 Y13381, RNAMPH1 *Rattus norvegicus* mRNA for amphiphysin, amph1 38 3.7
 AC002994, AC002994 *Homo sapiens* chromosome 17, clone HRPC987K... 38 3.7
 AB008271, AB008271 *Arabidopsis thaliana* genomic DNA. chromos... 38 3.7
 D49701, ASNNIAD *Aspergillus oryzae* niaD gene for nitrate red... 38 3.7

X59422, HSPLD1 H.sapiens Pl d1 repetitive DNA 38 3.7
 Z98555, PFSC03027 Plasmodium falciparum DNA *** SEQUENCING I... 38 3.7

HUMAN ESTs

AA315671, AA315671 EST187451 Colon carcinoma (HCC) cell line ... 932 0.0
 U56653, HSU56653 Human heat shock inducible mRNA 769 0.0
 AA487685, AA487685 ab23b09.r1 Stratagene lung (#937210) Homo ... 751 0.0
 AA044797, AA044797 zk67g12.r1 Soares pregnant uterus NbHPU Ho... 749 0.0
 AA314922, AA314922 EST186735 HCC cell line (matastasis to liv... 698 0.0
 AA082278, AA082278 zn42d12.r1 Stratagene endothelial cell 937... 668 0.0
 H22613, H22613 yn64f03.r1 Homo sapiens cDNA clone 173213 5'. 624 e-177
 AA044743, AA044743 zk67g12.s1 Soares pregnant uterus NbHPU Ho... 622 e-176
 AA487470, AA487470 ab23b09.s1 Stratagene lung (#937210) Homo ... 601 e-170
 AA121057, AA121057 zm22b03.r1 Stratagene pancreas (#937208) H... 581 e-164
 AA194396, AA194396 zq05g05.s1 Stratagene muscle 937209 Homo s... 535 e-150
 AA384283, AA384283 EST97787 Thyroid Homo sapiens cDNA 5' end 535 e-150
 AA669015, AA669015 ab88f01.s1 Stratagene lung (#937210) Homo ... 535 e-150
 AA194336, AA194336 zq05g05.r1 Stratagene muscle 937209 Homo s... 505 e-141
 R96173, R96173 yt84e09.r1 Homo sapiens cDNA clone 231016 5'. 486 e-135
 AA028934, AA028934 zk08b09.s1 Soares pregnant uterus NbHPU Ho... 484 e-134
 AA564849, AA564849 nj22c04.s1 NCI_CGAP_AA1 Homo sapiens cDNA ... 442 e-122
 AA932576, AA932576 oo57g10.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 440 e-121
 AA876265, AA876265 oi12g09.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 434 e-120
 AA025525, AA025525 ze86a11.s1 Soares fetal heart NbHH19W Homo... 430 e-118
 U56654, HSU56654 Human heat shock inducible mRNA 426 e-117
 AA746600, AA746600 nx18c02.s1 NCI_CGAP_GC3 Homo sapiens cDNA ... 406 e-111
 AA876346, AA876346 oj24a11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 406 e-111
 W23082, W23082 78D1 Human retina cDNA Tsp509I-cleaved sublibr... 402 e-110
 AI034059, AI034059 ow14h11.x1 Soares_parathyroid_tumor_NbHPA ... 357 2e-96
 AA662934, AA662934 nu92d09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 323 2e-86
 AA844331, AA844331 ai95f01.s1 Soares parathyroid tumor NbHPA ... 301 8e-80
 AA249866, AA249866 y0761.seq.F Human fetal heart, Lambda ZAP ... 297 1e-78
 R19215, R19215 yg24b07.r1 Homo sapiens cDNA clone 33126 5'. 280 3e-73
 T39355, T39355 ya04g08.r1 Homo sapiens cDNA clone 60542 5'. 254 2e-65
 AA731264, AA731264 nw57c08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 220 2e-55
 AA768549, AA768549 oa67c07.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 220 2e-55
 AA668506, AA668506 ac49a11.s1 Stratagene hNT neuron (#937233)... 216 4e-54
 T55337, T55337 yb79b05.s1 Homo sapiens cDNA clone 77361 3'. 198 8e-49
 AA860575, AA860575 aj86a09.s1 Soares parathyroid tumor NbHPA ... 198 8e-49
 AA335548, AA335548 EST39962 Epididymus Homo sapiens cDNA 5' end 109 6e-22
 R13183, R13183 yf73f02.r1 Homo sapiens cDNA clone 27960 5'. 58 2e-06
 T80034, T80034 yd04c06.r1 Homo sapiens cDNA clone 24672 5'. 38 1.8
 AA595230, AA595230 nl84g02.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 38 1.8

AA871935, AA871935 vq42h02.r1 Barstead bowel MPLRB9 Mus muscu... 664 0.0
 AA062330, AA062330 ml35e10.r1 Stratagene mouse testis (#93730... 589 e-167
 AI048164, AI048164 ud71b09.y1 Sugano mouse liver mlia Mus mus... 537 e-151
 W08037, W08037 mb37h01.r1 Soares mouse p3NMF19.5 Mus musculus... 462 e-128
 AA387311, AA387311 vc19a03.r1 Ko mouse embryo 11 5dpc Mus mus... 264 6e-69
 AA163072, AA163072 ms31a11.r1 Stratagene mouse skin (#937313)... 212 2e-53
 AA596763, AA596763 vm60a10.r1 Stratagene mouse Tcell 937311 M... 178 3e-43
 AA562549, AA562549 vl63a11.r1 Knowles Solter mouse blastocyst... 143 2e-32
 AA212378, AA212378 mu44c03.r1 Soares 2NbMT Mus musculus cDNA ... 113 1e-23
 AA450862, AA450862 vg55h12.r1 Beddington mouse embryonic regi... 111 5e-23
 AA990073, AA990073 ua59a01.r1 Soares 2NbMT Mus musculus cDNA ... 86 3e-15
 AA921175, AA921175 vy54b10.r1 Stratagene mouse lung 937302 Mu... 78 8e-13
 AA261119, AA261119 mz89e01.r1 Soares mouse NML Mus musculus c... 38 0.65
 AI005952, AI005952 ua80f06.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.6
 AA123274, AA123274 mn23a08.r1 Beddington mouse embryonic regi... 36 2.6
 AI036828, AI036828 vw96c02.r1 Stratagene mouse skin (#937313)... 36 2.6

H35787, H35787 EST109178 Rat PC-12 cells, NGF-treated (9 days... 105 3e-21
 AA686082, AA686082 EST109179 Rat PC-12 cells, NGF-treated (9 ... 86 3e-15
 C23464, C23464 Jpanese flounder liver cDNA, LE5(10) 72 4e-11
 C23465, C23465 Jpanese flounder liver cDNA, LE5(10) 56 2e-06
 AA520314, AA520314 TgESTzz38h12.r1 TgME49 invivo Bradyzoite c... 38 0.57
 AA520085, AA520085 TgESTzz37g05.r1 TgME49 invivo Bradyzoite c... 38 0.57
 AA520033, AA520033 TgESTzz36f10.r1 TgME49 invivo Bradyzoite c... 38 0.57
 AA012516, AA012516 TgESTzz23f04.r1 TgME49cDNA Toxoplasma gond... 38 0.57
 AA274286, AA274286 TgESTzz24c01.s1 TgME49 invivo Bradyzoite c... 38 0.57
 AA660585, AA660585 00471 MtRHE Medicago truncatula cDNA 5' si... 38 0.57
 L35828, BNAESTBD Brassica rapa (clone F0621) expressed sequen... 38 0.57
 AA520070, AA520070 TgESTzz37e05.r1 TgME49 invivo Bradyzoite c... 38 0.57
 C30080, C30080 C.elegans cDNA clone yk236c3 : 3' end, single... 36 2.3
 C39044, C39044 C.elegans cDNA clone yk505a4 : 3' end, single... 36 2.3
 C55023, C55023 C.elegans cDNA clone yk422a3 : 3' end, single... 36 2.3
 AA542589, AA542589 fa08d06.s1 Zebrafish ICRFzfls Danio rerio ... 36 2.3
 N25370, N25370 EST000480 Schistosoma mansoni cDNA clone SMTBA... 36 2.3
 AA820625, AA820625 LD24443.5prime LD Drosophila melanogaster ... 36 2.3
 AA494922, AA494922 fa12g10.r1 Zebrafish ICRFzfls Danio rerio ... 36 2.3
 AA495181, AA495181 fa04d06.s1 Zebrafish ICRFzfls Danio rerio ... 36 2.3
 D73287, CELK116G6R C.elegans cDNA clone yk116g6 : 3' end, si... 36 2.3
 C28238, C28238 Rice cDNA, partial sequence (C60429_1A) 36 2.3

SEQ ID NO:557

AF039693, AF039693 Homo sapiens unknown protein mRNA, complet... 948 0.0
 S51239, S51239 calreticulin [*Aplysia californica*=marine snail... 56 1e-05
 Z74035, CEF47G9 *Caenorhabditis elegans* cosmid F47G9, complet... 46 0.012
 U25723, CPU25723 *Cavia porcellus* alpha-2B adrenoceptor gene, ... 44 0.047
 AL021407, HS13D10 Homo sapiens DNA sequence from PAC 13D10 o... 42 0.19
 U67572, U67572 *Methanococcus jannaschii* section 114 of 150 of... 42 0.19
 V01470, ZMZE01 Zea mays gene encoding a zein gene (clone lam... 42 0.19
 U06631, HSU06631 Human (H326) mRNA, complete cds. 42 0.19
 X82638, CSCYTOX *C.sordelii* cytotoxin gene 42 0.19
 AE000926, AE000926 *Methanobacterium thermoautotrophicum* from ... 42 0.19
 AC004135, AC004135 Genomic sequence for *Arabidopsis thaliana* ... 42 0.19
 AC003010, HUAC003010 Homo sapiens Chromosome 16 BAC clone CIT... 40 0.74
 AF050157, MMHC135G15 *Mus musculus* major histocompatibility lo... 40 0.74
 AC002352, AC002352 Homo sapiens 12q24 PAC P256D10 complete se... 40 0.74
 X07699, MMNUCLEO Mouse nucleolin gene 40 0.74
 X02399, MMHOM6 Mouse embryonal carcinoma DNA fragment contai... 40 0.74
 M93661, RATNOTCHX Rat notch 2 mRNA. 40 0.74
 M17440, MUSMHC4H2S Mouse MHC (H-2) S region complement compon... 40 0.74
 U15972, MMU15972 *Mus musculus* homeobox (*Hoxa7*) gene, complete... 40 0.74
 AB001601, AB001601 Homo sapiens DBP2 mRNA for ATP-dependent ... 40 0.74
 U09820, HSU09820 Human helicase II (*RAD54L*) mRNA, complete cds. 40 0.74
 AB011149, AB011149 Homo sapiens mRNA for KIAA0577 protein, c... 40 0.74
 U26259, MMU26259 *Mus musculus* C2-H2 zinc finger protein mRNA,... 40 0.74
 L48363, MUSZFPTR *Mus musculus* zinc finger protein gene, compl... 40 0.74
 AC003113, AC003113 *Arabidopsis thaliana* BAC F24O1 chromosome ... 40 0.74
 D76432, D76432 Mouse mRNA for transcriptional repressor delt... 40 0.74
 U72937, HSU72937 Human putative DNA dependent ATPase and heli... 40 0.74
 U72915, HSATRX16 Human putative DNA dependent ATPase and heli... 40 0.74
 U00995, U00995 *Rattus norvegicus* TA1 mRNA, complete cds. 40 0.74
 Z48618, SCCHVII35 *S.cerevisiae* genes for *RAD54*, *ACE1*(*CUP2*), ... 40 0.74
 U75653, HSU75653 Human zinc finger helicase (*Znf-HX*) mRNA, co... 40 0.74
 Z72672, SCYGL150C *S.cerevisiae* chromosome VII reading frame ... 40 0.74
 Z50109, CEC09H10 *Caenorhabditis elegans* cosmid C09H10, compl... 40 0.74
 AF013969, AF013969 *Mus musculus* antigen containing epitope to... 40 0.74
 M95627, HUMAAMP1X Homo sapiens angio-associated migratory cel... 40 0.74
 U72936, HSU72936 Human putative DNA dependent ATPase and heli... 40 0.74
 M88753, DROHTCHRPI Fruitfly heterochromatin protein-1 gene, c... 40 0.74
 U76906, REU76906 *Rhizobium etli* FixK (*fixK*), *FixN* (*fixN*), mon... 40 0.74
 U97085, HSXNP14 Homo sapiens X-linked nuclear protein (*ATRX*) ... 40 0.74
 L34363, HUMNUCPRO Human X-linked nuclear protein (*XNP*) gene, ... 40 0.74
 U72938, HSU72938 Human putative DNA dependent ATPase and heli... 40 0.74

X56983, EAVATP1 E.arvense gene for catalytic 70kDa V-ATPase ... 40 0.74
 U88539, MMU88539 Mus musculus chromatin structural protein ho... 40 0.74
 U07704, HSU07704 Human protein kinase PITSLRE isoform PBETA21... 38 2.9
 U07705, HSU07705 Human protein kinase PITSLRE isoform PBETA22... 38 2.9
 AF019612, AF019612 Homo sapiens S2P mRNA, complete cds 38 2.9
 U04818, HSU04818 Human protein kinase PITSLRE alpha 2-4 mRNA,... 38 2.9
 AB002381, AB002381 Human mRNA for KIAA0383 gene, partial cds 38 2.9
 AB009520, AB009520 Pyrococcus horikoshii OT3 genomic DNA, 13... 38 2.9
 Z83848, HS57A13 Human DNA sequence from PAC 57A13 between ma... 38 2.9
 AC004592, AC004592 Homo sapiens PAC clone DJ0244J05 from 5q31... 38 2.9
 L11710, ZEFZCMYC Brachydanio rerio c-myc oncoprotein mRNA, co... 38 2.9
 D43920, CHKMETASE Chicken mRNA for DNA (cytosine-5-)-methylt... 38 2.9
 U49056, RNU49056 Rattus norvegicus CTD-binding SR-like protei... 38 2.9
 U04824, HSU04824 Human protein kinase PITSLRE alpha 2-1 mRNA,... 38 2.9
 U78045, HSU78045 Human collagenase and stromelysin genes, com... 38 2.9
 U04816, HSU04816 Human protein kinase PITSLRE alpha 2-2 mRNA,... 38 2.9
 U04817, HSU04817 Human protein kinase PITSLRE alpha 2-3 mRNA,... 38 2.9

HUMAN ESTs

AA639190, AA639190 ns04a01.r1 NCI_CGAP_Ew1 Homo sapiens cDNA ... 519 e-145
 AA172199, AA172199 zo96a06.r1 Stratagene ovarian cancer (#937... 513 e-144
 R23642, R23642 yh35e03.r1 Homo sapiens cDNA clone 131740 5'. 490 e-136
 AA902270, AA902270 ok69e04.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 450 e-124
 AA947303, AA947303 ok20d04.s1 Soares_NSF_F8_9W_OT_PA_P_S1 Hom... 402 e-110
 AA588066, AA588066 nk10d08.s1 NCI_CGAP_Co2 Homo sapiens cDNA ... 347 1e-93
 AA412036, AA412036 zt68d09.s1 Soares testis NHT Homo sapiens ... 347 1e-93
 AA480337, AA480337 ne33a03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 347 1e-93
 AA508745, AA508745 ni23a03.s1 NCI_CGAP_Co4 Homo sapiens cDNA ... 347 1e-93
 AA172083, AA172083 zo96a06.s1 Stratagene ovarian cancer (#937... 315 4e-84
 AA811913, AA811913 ob51d06.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 299 2e-79
 AA402403, AA402403 zt68d09.r1 Soares testis NHT Homo sapiens ... 299 2e-79
 AA725458, AA725458 ai16g01.s1 Soares parathyroid tumor NbHPA ... 250 2e-64
 R26558, R26558 yh35e02.s1 Homo sapiens cDNA clone 131738 3'. 250 2e-64
 W25749, W25749 11b4 Human retina cDNA randomly primed sublibr... 103 3e-20
 W27158, W27158 22h9 Human retina cDNA randomly primed sublibr... 66 6e-09
 AA737681, AA737681 nw63c04.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 42 0.090
 T65784, T65784 yc11f10.s1 Homo sapiens cDNA clone 80395 3' si... 42 0.090
 R52021, R52021 yg84h09.r1 Homo sapiens cDNA clone 40181 5' si... 42 0.090
 AA569993, AA569993 nm47h04.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 42 0.090
 R50149, R50149 yj61c05.s1 Homo sapiens cDNA clone 153224 3' s... 42 0.090
 R87930, R87930 yo47a11.s1 Homo sapiens cDNA clone 181052 3' s... 42 0.090
 AA812204, AA812204 ob84f01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 42 0.090
 AA770224, AA770224 ah82e12.s1 Soares testis NHT Homo sapiens ... 42 0.090

D29591, HUMNK752	Human keratinocyte cDNA, clone 752	40	0.36
AA324325, AA324325	EST27219 Cerebellum II Homo sapiens cDNA 5...	40	0.36
AA053063, AA053063	zl71c03.r1 Stratagene colon (#937204) Homo...	40	0.36
T35539, T35539	EST86964 Homo sapiens cDNA 5' end similar to N...	40	0.36
AA974278, AA974278	oq14d03.s1 NCI_CGAP_GC4 Homo sapiens cDNA ...	40	0.36
W26196, W26196	22b5 Human retina cDNA randomly primed sublibr...	40	0.36
H92585, H92585	yt89c03.s1 Homo sapiens cDNA clone 231460 3'.	40	0.36
AA232334, AA232334	zr27b04.r1 Stratagene NT2 neuronal precurs...	40	0.36
N55775, N55775	J2481F Homo sapiens cDNA clone J2481 5'.	40	0.36
R98701, R98701	yr31f08.s1 Homo sapiens cDNA clone 206919 3'.	40	0.36
C14370, C14370	Human fetal brain cDNA 5'-end GEN-050F01	40	0.36
H19156, H19156	yn50c01.r1 Homo sapiens cDNA clone 171840 5'.	40	0.36
AA299557, AA299557	EST12080 Uterus tumor I Homo sapiens cDNA ...	40	0.36
W84460, W84460	zd89d12.r1 Soares fetal heart NbHH19W Homo sap...	40	0.36
T54194, T54194	ya90a02.r2 Homo sapiens cDNA clone 68906 5'.	40	0.36
AA100203, AA100203	zm16f12.r1 Stratagene pancreas (#937208) H...	38	1.4
AA993061, AA993061	ot92h08.s1 Soares_total_fetus_Nb2HF8_9w Ho...	38	1.4
R53406, R53406	yj70d07.r1 Homo sapiens cDNA clone 154093 5' s...	38	1.4
H99671, H99671	yx35b03.s1 Homo sapiens cDNA clone 263693 3'.	38	1.4
W03410, W03410	za07c09.r1 Soares melanocyte 2NbHM Homo sapien...	38	1.4
N35475, N35475	yy24b03.s1 Homo sapiens cDNA clone 272141 3'.	38	1.4
AA630851, AA630851	nt57f04.s1 NCI_CGAP_Pr3 Homo sapiens cDNA ...	38	1.4
N66458, N66458	yz41b08.s1 Homo sapiens cDNA clone 285591 3'.	38	1.4
AA736438, AA736438	zh31b09.s1 Soares pineal gland N3HPG Homo ...	38	1.4
AA911761, AA911761	og19b01.s1 NCI_CGAP_PNS1 Homo sapiens cDNA...	38	1.4
AA085513, AA085513	zn43a10.r1 Stratagene HeLa cell s3 937216 ...	38	1.4
AA678530, AA678530	ah02e05.s1 Gessler Wilms tumor Homo sapien...	38	1.4
AA782011, AA782011	ai75b12.s1 Soares testis NHT Homo sapiens ...	38	1.4
F12352, HSC38H091	H. sapiens partial cDNA sequence; clone c-...	38	1.4
AA861288, AA861288	ak33g01.s1 Soares testis NHT Homo sapiens ...	38	1.4
AA908705, AA908705	ol01b09.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ...	38	1.4
AA298850, AA298850	EST114450 Thyroid Homo sapiens cDNA 5' end	38	1.4
AA237204, AA237204	mx18d02.r1 Soares mouse NML Mus musculus c...	172	1e-41
AI047347, AI047347	ud65c01.y1 Sugano mouse liver mlia Mus mus...	42	0.032
AA832736, AA832736	vw45g10.r1 Soares mouse mammary gland NbMM...	42	0.032
AA960471, AA960471	vw63a05.s1 Soares mouse mammary gland NMLM...	40	0.13
AA880584, AA880584	vw92e01.r1 Stratagene mouse skin (#937313)...	40	0.13
AA107508, AA107508	mp05e07.r1 Life Tech mouse embryo 8 5dpc l...	40	0.13
AA116682, AA116682	mn28c06.r1 Beddington mouse embryonic regi...	40	0.13
AA522310, AA522310	vi45b02.r1 Beddington mouse embryonic regi...	40	0.13
AA162231, AA162231	mn44h02.r1 Beddington mouse embryonic regi...	40	0.13

AA414037, AA414037 vc68g03.s1 Knowles Solter mouse 2 cell Mus... 40 0.13
AA596585, AA596585 vm58e12.r1 Stratagene mouse Tcell 937311 M... 38 0.51
AA863563, AA863563 vx05a10.r1 Soares 2NbMT Mus musculus cDNA ... 38 0.51
AA795177, AA795177 vq94g04.r1 Knowles Solter mouse blastocyst... 38 0.51
AA914764, AA914764 vy92h04.r1 Soares mouse mammary gland NbMM... 38 0.51
AA590440, AA590440 vm20c04.r1 Knowles Solter mouse blastocyst... 38 0.51
AA563402, AA563402 vl75d08.r1 Knowles Solter mouse blastocyst... 38 0.51
AA260352, AA260352 va93c10.r1 Soares mouse 3NME12 5 Mus muscu... 38 0.51
AA444734, AA444734 ve75d10.r1 Soares mouse mammary gland NbMM... 38 0.51
C85885, C85885 Mus musculus fertilized egg cDNA 3'-end seque... 38 0.51
AA794590, AA794590 vu78h12.r1 Stratagene mouse skin (#937313)... 38 0.51
AA529643, AA529643 vi38a09.r1 Beddington mouse embryonic regi... 38 0.51
AA607084, AA607084 vm84a09.r1 Knowles Solter mouse blastocyst... 38 0.51
AA636994, AA636994 vn05g06.r1 Knowles Solter mouse blastocyst... 38 0.51
AA675676, AA675676 vr73h08.s1 Knowles Solter mouse 2 cell Mus... 38 0.51
AA163890, AA163890 ms52f09.r1 Life Tech mouse embryo 13 5dpc ... 38 0.51
C80539, C80539 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 38 0.51
AA051352, AA051352 mj53a09.r1 Soares mouse embryo NbME13.5 14... 38 0.51
W36885, W36885 mb64f09.r1 Soares mouse p3NMF19.5 Mus musculus... 38 0.51
AA930627, AA930627 vy67c05.r1 Stratagene mouse macrophage (#9... 38 0.51
AA244639, AA244639 mx02g12.r1 Soares mouse NML Mus musculus c... 36 2.0
AA967267, AA967267 vz70e08.r1 Soares mouse mammary gland NbMM... 36 2.0
AI048938, AI048938 uc84h06.y1 Sugano mouse kidney mkia Mus mu... 36 2.0
AA162722, AA162722 mn42b07.r1 Beddington mouse embryonic regi... 36 2.0
AA170036, AA170036 ms52d01.r1 Life Tech mouse embryo 13 5dpc ... 36 2.0
AA511382, AA511382 vg14b04.r1 Soares mouse NbMH Mus musculus ... 36 2.0
AA555634, AA555634 vk49f08.r1 Stratagene mouse Tcell 937311 M... 36 2.0
AA212823, AA212823 mw81c07.r1 Soares mouse NML Mus musculus c... 36 2.0
AA606813, AA606813 vm90h12.r1 Knowles Solter mouse blastocyst... 36 2.0
AA591610, AA591610 vk49d08.r1 Stratagene mouse Tcell 937311 M... 36 2.0
AA987039, AA987039 uc74e05.x1 Sugano mouse liver mlia Mus mus... 36 2.0
AA105882, AA105882 ml84h07.r1 Stratagene mouse kidney (#93731... 36 2.0
AA451370, AA451370 vf84h02.r1 Soares mouse mammary gland NbMM... 36 2.0
AA612185, AA612185 vo03d05.r1 Stratagene mouse skin (#937313)... 36 2.0
AA103424, AA103424 mo21e05.r1 Life Tech mouse embryo 13 5dpc ... 36 2.0
AA145817, AA145817 mq68a12.r1 Soares 2NbMT Mus musculus cDNA ... 36 2.0
AA272905, AA272905 va39d01.r1 Soares mouse 3NME12 5 Mus muscu... 36 2.0
AA237313, AA237313 mx17b11.r1 Soares mouse NML Mus musculus c... 36 2.0
AA267119, AA267119 mz74d07.r1 Soares mouse lymph node NbMLN M... 36 2.0
AA106683, AA106683 ml83h06.r1 Stratagene mouse kidney (#93731... 36 2.0
AA125061, AA125061 mq83d10.r1 Stratagene mouse melanoma (#937... 36 2.0
AA655241, AA655241 vq84c07.s1 Knowles Solter mouse 2 cell Mus... 36 2.0
AA512835, AA512835 vg13f11.r1 Soares mouse NbMH Mus musculus ... 36 2.0

C70525, C70525 *C.elegans* cDNA clone yk409g6 : 5' end, single... 44 0.007
 F15112, SSO4D09 *S.scrofa* mRNA; expressed sequence tag (5'; c... 42 0.029
 AA684640, AA684640 EST104989 Rat PC-12 cells, untreated Rattu... 40 0.11
 H32045, H32045 EST106774 Rat PC-12 cells, untreated Rattus sp... 40 0.11
 AA660422, AA660422 00298 *MtRHE* *Medicago truncatula* cDNA 5' 40 0.11
 C59696, C59696 *C.elegans* cDNA clone yk440e1 : 3' end, single... 38 0.45
 AI008699, AI008699 EST203150 Normalized rat embryo, Bento Soa... 38 0.45
 AA753263, AA753263 96BS0294 Rice Immature Seed Lambda ZAPII c... 38 0.45
 T38461, T38461 EST103957 *Saccharomyces cerevisiae* cDNA 3' end. 38 0.45
 C59257, C59257 *C.elegans* cDNA clone yk386b12 : 3' end, singl... 38 0.45
 AA948906, AA948906 LD27590.5prime LD *Drosophila melanogaster* ... 38 0.45
 AI001628, AI001628 EST0210 *Tilapia* brain cDNA library in pUC1... 38 0.45
 H31962, H31962 EST106545 Rat PC-12 cells, untreated Rattus sp... 38 0.45
 AA979509, AA979509 LD34118.5prime LD *Drosophila melanogaster* ... 38 0.45
 D41274, RICS3647A Rice cDNA, partial sequence (S3647_1A). 38 0.45
 C58362, C58362 *C.elegans* cDNA clone yk366a8 : 3' end, single... 38 0.45
 C57756, C57756 *C.elegans* cDNA clone yk298b9 : 3' end, single... 38 0.45
 AA753070, AA753070 97AS2091 Rice Immature Seed Lambda ZAPII c... 38 0.45
 H74687, H74687 383 *Brassica napus* cDNA clone R25R. 38 0.45
 C10513, C10513 *C.elegans* cDNA clone yk147e9 : 3' end, single... 38 0.45
 C55569, C55569 *C.elegans* cDNA clone yk191d1 : 3' end, single... 38 0.45
 C94819, C94819 *Sus scrofa* mRNA; expressed sequence tag (5'; ... 38 0.45
 C32982, C32982 *C.elegans* cDNA clone yk338a12 : 3' end, singl... 38 0.45
 AA816691, AA816691 LD03795.5prime LD *Drosophila melanogaster* ... 36 1.8
 AA519844, AA519844 TgESTzz36c03.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA531839, AA531839 TgESTzz47h05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA660182, AA660182 00022 *MtRHE* *Medicago truncatula* cDNA 5' si... 36 1.8
 D71983, CELK084H2R *C.elegans* cDNA clone yk84h2 : 3' end, sin... 36 1.8
 R29905, R29905 12510 Lambda-PRL2 *Arabidopsis thaliana* cDNA cl... 36 1.8
 AA519997, AA519997 TgESTzz36h03.r1 TgME49 invivo Bradyzoite c... 36 1.8
 U83048, BTU83048 *Bos taurus* clone 0429 mRNA sequence 36 1.8
 AA440655, AA440655 LD15510.5prime LD *Drosophila melanogaster* ... 36 1.8
 AA559374, AA559374 MU002092.NH3 York-Harrop-lung-A *Schistosom*... 36 1.8
 C93857, C93857 *Dictyostelium discoideum* slug cDNA, clone SSL794 36 1.8
 AA520901, AA520901 TgESTzz65a05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 T46158, T46158 9421 Lambda-PRL2 *Arabidopsis thaliana* cDNA clo... 36 1.8
 AA520866, AA520866 TgESTzz68e05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 Z17562, ATTS0136 *A. thaliana* transcribed sequence; clone TAT... 36 1.8
 AA520811, AA520811 TgESTzz64d05.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA567455, AA567455 HL01288.5prime HL *Drosophila melanogaster* ... 36 1.8
 AA519228, AA519228 TgESTzz39h02.s1 TgME49 invivo Bradyzoite c... 36 1.8
 AA531917, AA531917 TgESTzz48f01.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA519829, AA519829 TgESTzz36a02.r1 TgME49 invivo Bradyzoite c... 36 1.8
 AA520185, AA520185 TgESTzz39d03.s1 TgME49 invivo Bradyzoite c... 36 1.8
 C37095, C37095 *C.elegans* cDNA clone yk482c11 : 3' end, singl... 36 1.8

T46009, T46009 9272 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.8
 T20458, T20458 2466 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.8
 F14402, ATTS5324 A. thaliana transcribed sequence; clone TAP... 36 1.8
 T20404, T20404 2412 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.8
 AA274295, AA274295 TgESTzz24c11.s1 TgME49 invivo Bradyzoite c... 36 1.8
 AA699152, AA699152 HL07807.5prime HL Drosophila melanogaster ... 36 1.8
 AA902065, AA902065 NCM1A12T3 Mycelial Neurospora crassa cDNA ... 36 1.8

SEQ ID NO:558

AF016585, AF016585 Streptomyces caelestis cytochrome P-450 hy... 42 0.092
 U50719, MSU50719 Manduca sexta neuroglian mRNA, complete cds 40 0.36
 Z97208, SPAC15A10 S.pombe chromosome I cosmid c15A10 40 0.36
 AC003063, AC003063 Mus musculus Chromosome 16 BAC Clone b40-o... 40 0.36
 X66455, MMFGFR2 M.musculus promoter region of fibroblast gro... 40 0.36
 D83785, D83785 Human mRNA for KIAA0200 gene, complete cds 40 0.36
 AC000398, AC000398 Genomic sequence from Mouse 11, complete s... 38 1.4
 AF062345, AF062345 Caulobacter crescentus Sts1 (sts1), S-laye... 38 1.4
 X12359, RCNIFR12 Rhodobacter capsulatus nifR1 and nifR2 gene 38 1.4
 X72382, RCNIFR3 R.capsulatus nifR3 DNA 38 1.4

HUMAN ESTs

R36714, R36714 yh93g06.s1 Homo sapiens cDNA clone 137338 3'. 775 0.0
 D61030, HUM149A04B Human fetal brain cDNA 5'-end GEN-149A04. 666 0.0
 D60944, HUM141D02B Human fetal brain cDNA 5'-end GEN-141D02. 656 0.0
 H03308, H03308 yj47d09.s1 Homo sapiens cDNA clone 151889 3'. 609 e-172
 AA435561, AA435561 zt73d09.s1 Soares testis NHT Homo sapiens ... 587 e-166
 AA977877, AA977877 oq56d03.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 571 e-161
 AA846787, AA846787 aj41h03.s1 Soares testis NHT Homo sapiens ... 563 e-159
 AA972542, AA972542 oo82e01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 561 e-158
 AA954270, AA954270 on72e06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 557 e-157
 AA740333, AA740333 ob23c02.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 557 e-157
 AA999722, AA999722 ov04c06.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 555 e-156
 AA970621, AA970621 op40h08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 551 e-155
 AA932930, AA932930 oo04g11.s1 Soares_NFL_T_GBC_S1 Homo sapien... 541 e-152
 AA725406, AA725406 ai13b11.s1 Soares parathyroid tumor NbHPA ... 539 e-152
 W74439, W74439 zd75d10.s1 Soares fetal heart NbHH19W Homo sap... 539 e-152
 AA868538, AA868538 ak43e08.s1 Soares testis NHT Homo sapiens ... 539 e-152
 R79832, R79832 yi89b08.s1 Homo sapiens cDNA clone 146391 3' s... 537 e-151

R63227, R63227 yi07e06.s1 Homo sapiens cDNA clone 138562 3'. 535 e-150
 AI027967, AI027967 ov84d04.x1 Soares_testis_NHT Homo sapiens ... 535 e-150
 AA776717, AA776717 ah49d07.s1 Soares testis NHT Homo sapiens ... 535 e-150
 AI040961, AI040961 ov53d06.x1 Soares_testis_NHT Homo sapiens ... 533 e-150
 AI024835, AI024835 ov35h09.x1 Soares_testis_NHT Homo sapiens ... 533 e-150
 AA740667, AA740667 ob01g12.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 531 e-149
 AA994527, AA994527 ou42h06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 531 e-149
 AA932728, AA932728 oo31g06.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 529 e-149
 AI001978, AI001978 ot39f03.s1 Soares_testis_NHT Homo sapiens ... 529 e-149
 N37092, N37092 yy41g08.s1 Homo sapiens cDNA clone 273854 3'. 529 e-149
 N27547, N27547 yy01e05.s1 Homo sapiens cDNA clone 269984 3'. 527 e-148
 AA883578, AA883578 al46b08.s1 Soares NFL T GBC S1 Homo sapien... 527 e-148
 AA890154, AA890154 al53f07.s1 Soares_NFL_T_GBC_S1 Homo sapien... 525 e-147
 AA757222, AA757222 ah56f11.s1 Soares testis NHT Homo sapiens ... 525 e-147
 AA456074, AA456074 aa17b07.s1 Soares NhHMPu S1 Homo sapiens c... 523 e-147
 AA884285, AA884285 am32f04.s1 Soares NFL T GBC S1 Homo sapien... 523 e-147
 AA969436, AA969436 op53e12.s1 Soares_NFL_T_GBC_S1 Homo sapien... 521 e-146
 AA952918, AA952918 on55h11.s1 Soares_NFL_T_GBC_S1 Homo sapien... 521 e-146
 AA971938, AA971938 op88b01.s1 Soares_NFL_T_GBC_S1 Homo sapien... 521 e-146
 R25112, R25112 yh36b12.s1 Homo sapiens cDNA clone 131807 3'. 519 e-146
 AA865258, AA865258 og87d08.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 519 e-146
 AA758323, AA758323 ah65e11.s1 Soares testis NHT Homo sapiens ... 519 e-146
 AA972041, AA972041 op88e06.s1 Soares_NFL_T_GBC_S1 Homo sapien... 519 e-146
 R76443, R76443 yi58e11.s1 Homo sapiens cDNA clone 143468 3'. 519 e-146
 AA917965, AA917965 om37e04.s1 Soares_NFL_T_GBC_S1 Homo sapien... 517 e-145
 AA505880, AA505880 ni01a09.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 517 e-145
 AA906270, AA906270 oj98e12.s1 Soares_NFL_T_GBC_S1 Homo sapien... 517 e-145
 AA758549, AA758549 ah70b04.s1 Soares testis NHT Homo sapiens ... 517 e-145
 AA927156, AA927156 om20f05.s1 Soares_NFL_T_GBC_S1 Homo sapien... 515 e-144
 AA976254, AA976254 oo30f08.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 515 e-144
 R23891, R23891 yh28a12.s1 Homo sapiens cDNA clone 131038 3'. 515 e-144
 AA938552, AA938552 oo78g11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 513 e-144
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 AA962659, AA962659 or31f10.s1 NCI_CGAP_GC3 Homo sapiens cDNA ... 511 e-143
 AA724803, AA724803 ai05f02.s1 Soares parathyroid tumor NbHPA ... 511 e-143
 AA410432, AA410432 zv12c09.s1 Soares NhHMPu S1 Homo sapiens c... 511 e-143
 AA775373, AA775373 ad19c07.s1 Soares NbHFB Homo sapiens cDNA ... 511 e-143
 AA758038, AA758038 ah67h09.s1 Soares testis NHT Homo sapiens ... 509 e-143
 AA904368, AA904368 ol15d02.s1 Soares_NFL_T_GBC_S1 Homo sapien... 509 e-143
 AA861386, AA861386 ak37b11.s1 Soares testis NHT Homo sapiens ... 507 e-142
 R31547, R31547 yh72g03.s1 Homo sapiens cDNA clone 135316 3'. 505 e-141
 AA843421, AA843421 ak07f11.s1 Soares parathyroid tumor NbHPA ... 504 e-141
 H02479, H02479 yj35e10.s1 Homo sapiens cDNA clone 150762 3'. 504 e-141
 N29346, N29346 yw85c12.s1 Homo sapiens cDNA clone 259030 3'. 504 e-141
 AA815351, AA815351 ai63g05.s1 Soares testis NHT Homo sapiens ... 504 e-141

AA923373, AA923373 ol46e03.s1 Soares_NFL_T_GBC_S1 Homo sapien... 502 e-140
H01218, H01218 yj31c08.s1 Homo sapiens cDNA clone 150350 3'. 500 e-140
AA988977, AA988977 or87e11.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 500 e-140
AA628621, AA628621 af40c02.s1 Soares total fetus Nb2HF8 9w Ho... 500 e-140
AA442745, AA442745 zv60a07.s1 Soares testis NHT Homo sapiens ... 498 e-139
AA777492, AA777492 zj02e07.s1 Soares fetal liver spleen 1NFLS... 498 e-139
R73670, R73670 yi55f03.s1 Homo sapiens cDNA clone 143165 3'. 498 e-139
H12460, H12460 yj12d05.s1 Homo sapiens cDNA clone 148521 3'. 498 e-139
AA875917, AA875917 oj15a08.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 496 e-138
R76230, R76230 yi71g11.s1 Homo sapiens cDNA clone 144740 3'. 494 e-138
AA970616, AA970616 op40h03.s1 Soares_NFL_T_GBC_S1 Homo sapien... 494 e-138
AA912408, AA912408 ol23a05.s1 Soares_NFL_T_GBC_S1 Homo sapien... 492 e-137
AA910051, AA910051 ol40e08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 492 e-137
AA815444, AA815444 ai65b11.s1 Soares testis NHT Homo sapiens ... 492 e-137
R76814, R76814 yi62f06.s1 Homo sapiens cDNA clone 143843 3'. 488 e-136
AA954722, AA954722 oo84c12.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 488 e-136
R65987, R65987 yi23e10.s1 Homo sapiens cDNA clone 140106 3'. 486 e-136
R63480, R63480 yi08e11.s1 Homo sapiens cDNA clone 138668 3'. 486 e-136
AA885425, AA885425 am12h09.s1 Soares NFL T GBC S1 Homo sapien... 486 e-136
AA884231, AA884231 am32a01.s1 Soares NFL T GBC S1 Homo sapien... 484 e-135
AA885048, AA885048 am11a12.s1 Soares NFL T GBC S1 Homo sapien... 482 e-134
AA996162, AA996162 os14f10.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 482 e-134
AA748637, AA748637 ny10a02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 482 e-134
AI031908, AI031908 ow47e12.x1 Soares_parathyroid_tumor_NbHPA ... 482 e-134
AA884703, AA884703 am18e02.s1 Soares NFL T GBC S1 Homo sapien... 480 e-134
AA928243, AA928243 on87c10.s1 Soares_NFL_T_GBC_S1 Homo sapien... 480 e-134
AI025986, AI025986 ow03a09.s1 Soares_parathyroid_tumor_NbHPA ... 478 e-133
AA897637, AA897637 oj72g07.s1 Soares_NFL_T_GBC_S1 Homo sapien... 472 e-131
AA877346, AA877346 olc07.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 472 e-131
AA833569, AA833569 aj46b02.s1 Soares testis NHT Homo sapiens ... 472 e-131
AA832163, AA832163 oc91b02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 470 e-131
R89052, R89052 ym99e08.s1 Homo sapiens cDNA clone 167078 3'. 470 e-131
N26589, N26589 yx91f03.s1 Homo sapiens cDNA clone 269117 3'. 460 e-128
R73883, R73883 yi56c03.s1 Homo sapiens cDNA clone 143236 3'. 454 e-126
AA579968, AA579968 ng51c03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 444 e-123
AA843427, AA843427 ak07g06.s1 Soares parathyroid tumor NbHPA ... 438 e-121
AA705903, AA705903 ah42g12.s1 Soares testis NHT Homo sapiens ... 436 e-121
AA835882, AA835882 oc81d05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 434 e-120
AA812583, AA812583 aj43b02.s1 Soares testis NHT Homo sapiens ... 432 e-119
AA512970, AA512970 nj16b08.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 432 e-119
R26664, R26664 yh35g10.s1 Homo sapiens cDNA clone 131778 3'. 428 e-118
AA429715, AA429715 zv60a07.r1 Soares testis NHT Homo sapiens ... 414 e-114
H17430, H17430 ym40f09.s1 Homo sapiens cDNA clone 50607 3'. 404 e-111
AA436117, AA436117 zu03d10.r1 Soares testis NHT Homo sapiens ... 402 e-110
AA099077, AA099077 zl77a09.s1 Stratagene colon (#937204) Homo... 400 e-110

R72440, R72440 yj90h02.s1 Homo sapiens cDNA clone 156051 3'. 379 e-103
 AA577436, AA577436 nm96h06.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 351 4e-95
 AA516390, AA516390 nf55e03.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 347 6e-94
 AA534533, AA534533 nf80h06.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 341 3e-92
 AA541583, AA541583 ni89f05.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 311 3e-83
 N72191, N72191 yz99f07.s1 Homo sapiens cDNA clone 291205 3'. 303 8e-81
 AA905015, AA905015 ok09b08.s1 Soares_NFL_T_GBC_S1 Homo sapien... 303 8e-81
 AA393148, AA393148 zt73d09.r1 Soares testis NHT Homo sapiens ... 287 4e-76
 AA939048, AA939048 op56h04.s1 Soares_NFL_T_GBC_S1 Homo sapien... 256 2e-66
 AA412317, AA412317 zt97c05.r1 Soares testis NHT Homo sapiens ... 246 2e-63
 R65986, R65986 yi23e10.r1 Homo sapiens cDNA clone 140106 5'. 238 4e-61
 AA400827, AA400827 zt76c07.s1 Soares testis NHT Homo sapiens ... 232 2e-59
 W00472, W00472 yz99f07.r1 Homo sapiens cDNA clone 291205 5'. 180 8e-44
 AA860558, AA860558 aj81e09.s1 Soares parathyroid tumor NbHPA ... 180 8e-44
 AA455577, AA455577 aa17b07.r1 Soares NhHMPu S1 Homo sapiens c... 176 1e-42
 AA583931, AA583931 nn64e04.s1 NCI_CGAP_Lar1 Homo sapiens cDNA... 172 2e-41
 AA907332, AA907332 ol22g11.s1 Soares_NFL_T_GBC_S1 Homo sapien... 168 3e-40
 R71169, R71169 yi53a12.r1 Homo sapiens cDNA clone 142942 5'. 159 3e-37
 W79084, W79084 zd75d10.r1 Soares fetal heart NbHH19W Homo sap... 155 4e-36
 AA295914, AA295914 EST101137 Thymus III Homo sapiens cDNA 5' end 135 4e-30
 AA860415, AA860415 aj60d10.s1 Soares testis NHT Homo sapiens ... 100 2e-19
 H01351, H01351 yi99a07.r1 Homo sapiens cDNA clone 147348 5'. 98 9e-19
 AA709286, AA709286 ai21g07.s1 Soares testis NHT Homo sapiens ... 96 3e-18
 AA931370, AA931370 oo03d01.s1 Soares_NFL_T_GBC_S1 Homo sapien... 96 3e-18
 AA501911, AA501911 ng54a08.s1 NCI_CGAP_Li2 Homo sapiens cDNA ... 94 1e-17
 AA548419, AA548419 nj14g09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 92 5e-17
 AA588892, AA588892 no23b06.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 92 5e-17
 AI025228, AI025228 ov40h08.x1 Soares_testis_NHT Homo sapiens ... 76 3e-12
 R73757, R73757 yi55f03.r1 Homo sapiens cDNA clone 143165 5'. 74 1e-11
 R23710, R23710 yh35g10.r1 Homo sapiens cDNA clone 131778 5'. 56 3e-06
 N40362, N40362 yy01e05.r1 Homo sapiens cDNA clone 269984 5'. 50 2e-04
 H59895, H59895 yr04c12.r1 Homo sapiens cDNA clone 204310 5'. 48 7e-04
 H12509, H12509 yj12d05.r1 Homo sapiens cDNA clone 148521 5'. 44 0.011
 N20344, N20344 yx38d02.s1 Homo sapiens cDNA clone 264003 3'. 38 0.70
 AA614692, AA614692 np52b10.s1 NCI_CGAP_Br1.1 Homo sapiens cDN... 38 0.70
 H30707, H30707 yo78f07.r1 Homo sapiens cDNA clone 184069 5'. 36 2.7
 H52973, H52973 yq82e04.r1 Homo sapiens cDNA clone 202302 5'. 36 2.7
 AA218550, AA218550 zq96b02.r1 Stratagene NT2 neuronal precurs... 36 2.7
 AA312481, AA312481 EST183215 Jurkat T-cells VI Homo sapiens c... 36 2.7
 AA632009, AA632009 np74c07.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 36 2.7
 H13363, H13363 yl71b10.r1 Homo sapiens cDNA clone 43343 5'. 36 2.7
 AI022018, AI022018 ow64d01.x1 Soares_senescent_fibroblasts_Nb... 36 2.7
 AA781996, AA781996 ai75a06.s1 Soares testis NHT Homo sapiens ... 36 2.7
 N21623, N21623 yx60a09.s1 Homo sapiens cDNA clone 266104 3'. 36 2.7
 AA326194, AA326194 EST29340 Cerebellum II Homo sapiens cDNA 5... 36 2.7

C76071, C76071 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 250 4e-65
 AA051612, AA051612 mj52c07.r1 Soares mouse embryo NbME13.5 14... 238 1e-61
 AA561635, AA561635 vl01h07.r1 Knowles Solter mouse blastocyst... 234 2e-60
 AA288419, AA288419 vb14h01.r1 Soares mouse NML Mus musculus c... 220 3e-56
 AA212883, AA212883 mw78e10.r1 Soares mouse NML Mus musculus c... 220 3e-56
 AA268018, AA268018 vb08e07.r1 Soares mouse NML Mus musculus c... 212 8e-54
 AA692427, AA692427 vt59b07.r1 Barstead mouse irradiated colon... 200 3e-50
 W18566, W18566 mb98h02.r1 Soares mouse p3NMF19.5 Mus musculus... 192 7e-48
 AA543948, AA543948 vj69b08.r1 Knowles Solter mouse blastocyst... 147 4e-34
 W41070, W41070 mc39b06.r1 Soares mouse p3NMF19.5 Mus musculus... 123 5e-27
 Z31174, MMTEST52 M.musculus expressed sequence tag MTEST52 117 3e-25
 AA530723, AA530723 vj32f07.r1 Stratagene mouse diaphragm (#93... 74 5e-12
 AA966940, AA966940 ua38c01.r1 Soares mouse mammary gland NbMM... 72 2e-11
 AA111079, AA111079 mp50e01.r1 Barstead MPLRB1 Mus musculus cD... 44 0.004
 AA049187, AA049187 mj51a02.r1 Soares mouse embryo NbME13.5 14... 36 0.99
 AA058246, AA058246 mg74e12.r1 Soares mouse embryo NbME13.5 14... 36 0.99
 AA153730, AA153730 mq60a02.r1 Soares 2NbMT Mus musculus cDNA ... 36 0.99
 AA473959, AA473959 vd02b12.s1 Knowles Solter mouse 2 cell Mus... 36 0.99
 W47887, W47887 mc83h09.r1 Soares mouse embryo NbME13.5 14.5 M... 36 0.99
 AA033312, AA033312 mi43g01.r1 Soares mouse embryo NbME13.5 14... 36 0.99
 AA980820, AA980820 ua46a04.r1 Soares mouse mammary gland NbMM... 36 0.99
 Z31139, MMTEST427 M.musculus expressed sequence tag MTEST427 36 0.99
 C76637, C76637 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 34 3.9
 AI049314, AI049314 uc87b10.y1 Sugano mouse kidney mkia Mus mu... 34 3.9
 AA670807, AA670807 vs70b02.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA727571, AA727571 vv01h11.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA571966, AA571966 vg12f07.r1 Soares mouse NbMH Mus musculus ... 34 3.9
 W37059, W37059 mb73f10.r1 Soares mouse p3NMF19.5 Mus musculus... 34 3.9
 AA760280, AA760280 vv74h11.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA799036, AA799036 vn40c12.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA432831, AA432831 vf28g07.r1 Knowles Solter mouse 8 cell Mus... 34 3.9
 AA562435, AA562435 vk98c01.r1 Knowles Solter mouse blastocyst... 34 3.9
 AA726680, AA726680 vu93g12.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA217464, AA217464 mu87d11.r1 Soares mouse lymph node NbMLN M... 34 3.9
 AA790564, AA790564 vx71e06.r1 Stratagene mouse skin (#937313)... 34 3.9
 AA033172, AA033172 mi37f06.r1 Soares mouse embryo NbME13.5 14... 34 3.9
 AA616204, AA616204 vo96h02.r1 Soares mouse mammary gland NbMM... 34 3.9
 AA982055, AA982055 ua37h05.r1 Soares mouse mammary gland NbMM... 34 3.9
 W47850, W47850 mc82h10.r1 Soares mouse embryo NbME13.5 14.5 M... 34 3.9
 AA537538, AA537538 vk48c12.r1 Soares mouse mammary gland NbMM... 34 3.9
 AA636986, AA636986 vn05f04.r1 Knowles Solter mouse blastocyst... 34 3.9

AI043768, AI043768 UI-R-C0-jm-d-11-0-UI.s1 UI-R-C0 Rattus nor... 174 1e-42
 AA531635, AA531635 TgESTzz29b08.r1 TgME49 invivo Bradyzoite c... 38 0.22
 AA944260, AA944260 EST199759 Normalized rat embryo, Bento Soa... 38 0.22
 AI008930, AI008930 EST203381 Normalized rat embryo, Bento Soa... 36 0.87
 D15788, RICC1258A Rice cDNA, partial sequence (C1258A). 36 0.87
 AA963741, AA963741 UI-R-C0-gt-b-09-0-UI.s1 UI-R-C0 Rattus nor... 36 0.87
 AA951235, AA951235 LD31601.3prime LD Drosophila melanogaster ... 34 3.5
 C20118, C20118 Rice cDNA, partial sequence (E11542_2A) 34 3.5
 AA820317, AA820317 LD23876.5prime LD Drosophila melanogaster ... 34 3.5
 AA950448, AA950448 LD30237.3prime LD Drosophila melanogaster ... 34 3.5

SEQ ID NO:559

U83883, RNU83883 Rattus norvegicus p105 coactivator mRNA, com... 42 0.11
 V00722, MMBGL1 Mouse gene for beta-1-globin. 40 0.45
 X14061, MMBGCXD M.musculus beta-globin complex DNA for y, bh... 40 0.45
 U20824, EHVU20824 Equine herpesvirus 2, complete genome 38 1.8
 U04106, PFU04106 Pleurotus fossulatus D1822, mating group VI,... 38 1.8
 U04101, POU04101 Pleurotus ostreatus D1742, Japan, mating gro... 38 1.8
 AC005174, AC005174 Homo sapiens clone UWGC:g1564a012 from 7p1... 38 1.8
 M18680, HUMRGAPS Homo sapiens 5S rRNA pseudogene. 38 1.8
 AL022121, MTV025 Mycobacterium tuberculosis H37Rv complete g... 38 1.8
 AF038379, AF038379 Leishmania amazonensis ribosomal protein S... 38 1.8
 Z11528, THIGPMR T.harzianum mRNA for imidazoleglycerolphosphate 38 1.8
 U32622, CTU32622 Comamonas testosteroni TsaR (tsaR), toluenes... 38 1.8
 U04102, POU04102 Pleurotus ostreatus D1743, Japan, mating gro... 38 1.8
 U04105, PFU04105 Pleurotus fossulatus D1821, mating group VI,... 38 1.8
 U04109, PEU04109 Pleurotus eryngii D1832, mating group VI rib... 38 1.8
 U65606, BSU65606 Basidiomycete from a bamboo (Phyllostachys p... 38 1.8

HUMAN ESTs

R49969, R49969 yj56c07.s1 Homo sapiens cDNA clone 152748 3' s... 523 e-147
 AA834501, AA834501 of21c02.s1 NCI_CGAP_Kid6 Homo sapiens cDNA... 381 e-104
 W96422, W96422 ze43a05.s1 Soares retina N2b4HR Homo sapiens c... 315 2e-84
 R47821, R47821 yj56c07.r1 Homo sapiens cDNA clone 152748 5'. 214 7e-54
 AA761660, AA761660 nz24b09.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 212 3e-53
 AA887861, AA887861 nq99b07.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 74 2e-11
 AA644044, AA644044 nm20b12.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 72 6e-11

AA115963, AA115963 zm78d11.s1 Stratagene neuroepithelium (#93... 40 0.22
AA779271, AA779271 zj43f02.s1 Soares fetal liver spleen 1NFLS... 40 0.22
T65600, T65600 yc76a04.r1 Homo sapiens cDNA clone 21496 5'. 38 0.86
AA515882, AA515882 nf67f10.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 38 0.86
AA664812, AA664812 nu69b05.s1 NCI_CGAP_Alv1 Homo sapiens cDNA... 36 3.4
T83365, T83365 ye03f05.s1 Homo sapiens cDNA clone 116673 3'. 36 3.4
AA009773, AA009773 zi04d04.s1 Soares fetal liver spleen 1NFLS... 36 3.4
AA916894, AA916894 og34g10.s1 NCI_CGAP_Br7 Homo sapiens cDNA ... 36 3.4
N27865, N27865 yy02g03.s1 Homo sapiens cDNA clone 270100 3'. 36 3.4
AA953544, AA953544 om79g06.s1 NCI_CGAP_Kid3 Homo sapiens cDNA... 36 3.4
AA505576, AA505576 nh93f03.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 36 3.4
H30276, H30276 yp42f05.s1 Homo sapiens cDNA clone 190113 3'. 36 3.4
AA699914, AA699914 zi61f08.s1 Soares fetal liver spleen 1NFLS... 36 3.4
AA595583, AA595583 nk92c04.s1 NCI_CGAP_Co11 Homo sapiens cDNA... 36 3.4
AA351139, AA351139 EST58769 Infant brain Homo sapiens cDNA 5'... 36 3.4
AA810167, AA810167 ob88a03.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 36 3.4
H50257, H50257 yo28a07.r1 Homo sapiens cDNA clone 179220 5'. 36 3.4
W19939, W19939 zb37e09.r1 Soares parathyroid tumor NbHPA Homo... 36 3.4
R19840, R19840 yg30e11.r1 Homo sapiens cDNA clone 33837 5'. 36 3.4
AA514234, AA514234 nf56e10.s1 NCI_CGAP_Co3 Homo sapiens cDNA ... 36 3.4

AA183407, AA183407 ms
AA821640, AA821640 vw
AA289310, AA289310

AA900756, AA900756 UI-R-E0-di-d-04-0-UI.s1 UI-R-E0 Rattus nor... 46 0.001
T18416, T18416 6c02e07t7 etiolated seedling Zea mays cDNA clo... 40 0.069
AA817427, AA817427 LD22827.5prime LD Drosophila melanogaster ... 36 1.1
AA274351, AA274351 TgESTzz25c09.s1 TgME49 invivo Bradyzoite c... 36 1.1
AA391823, AA391823 LD10747.5prime LD Drosophila melanogaster ... 36 1.1
AA274275, AA274275 TgESTzz24b02.s1 TgME49 invivo Bradyzoite c... 34 4.3
R86490, R86490 RABEST068T Oryctolagus cuniculus cDNA clone pR... 34 4.3
AA965817, AA965817 o5g08a1.r1 Aspergillus nidulans 24hr asexu... 34 4.3

SEQ ID NO:560

X81198, L35746, L49403, U21317, Z35640, AL010273, U09850, AF071771, Z96434,

Z50028, X72735, U13072, Z34294, AB002109, X68401, M92840, D88399, Z36238, AF000262, Z46828,

HUMAN ESTs

AA215808, AA215808 zr98b10.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 1082 0.0
 N75131, N75131 yz29g07.r1 Soares multiple sclerosis 2NbHMSP H... 989 0.0
 AA709149, AA709149 zf98g05.s1 Soares fetal heart NbHH19W Homo... 985 0.0
 AA428341, AA428341 zw18f09.s1 Soares ovary tumor NbHOT Homo s... 967 0.0
 AA043426, AA043426 zk54h09.r1 Soares pregnant uterus NbHPU Ho... 870 0.0
 AA878521, AA878521 oj19c01.s1 NCI_CGAP_Kid5 Homo sapiens cDNA... 844 0.0
 AA599696, AA599696 ag10h01.s1 Gessler Wilms tumor Homo sapien... 842 0.0
 W52304, W52304 zc47c08.r1 Soares senescent fibroblasts NbHSF ... 841 0.0
 AA043427, AA043427 zk54h09.s1 Soares pregnant uterus NbHPU Ho... 769 0.0
 N64314, N64314 yz46a12.s1 Homo sapiens cDNA clone 286078 3'. 763 0.0
 N52360, N52360 yz29g07.s1 Soares multiple sclerosis 2NbHMSP H... 753 0.0
 AA290863, AA290863 zt19a08.s1 Soares ovary tumor NbHOT Homo s... 747 0.0
 AA768023, AA768023 oa60e03.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 728 0.0
 AA872018, AA872018 oi05f08.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 718 0.0
 AA164765, AA164765 zp01g09.s1 Stratagene ovarian cancer (#937... 716 0.0
 AA814881, AA814881 oa75e02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 708 0.0
 R86915, R86915 yq30f07.r1 Homo sapiens cDNA clone 197317 5'. 692 0.0
 W56703, W56703 zd14e01.r1 Soares fetal heart NbHH19W Homo sap... 642 0.0
 R84872, R84872 yq27e01.r1 Soares fetal liver spleen 1NFLS Hom... 636 0.0
 D79691, HUM307D10B Human aorta cDNA 5'-end GEN-307D10. 630 e-179
 AA025638, AA025638 ze90d11.s1 Soares fetal heart NbHH19W Homo... 626 e-178
 AA298883, AA298883 EST114512 Pancreas tumor I Homo sapiens cD... 624 e-177
 R86903, R86903 yq30d07.r1 Homo sapiens cDNA clone 197293 5'. 622 e-176
 AA033584, AA033584 zk21b12.s1 Soares pregnant uterus NbHPU Ho... 618 e-175
 AA633335, AA633335 nq58h09.s1 NCI_CGAP_Co9 Homo sapiens cDNA ... 611 e-173
 AA298894, AA298894 EST114513 Pancreas tumor I Homo sapiens cD... 599 e-169
 R85806, R85806 yq27e01.s1 Soares fetal liver spleen 1NFLS Hom... 595 e-168
 AA872617, AA872617 oi05g07.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 591 e-167
 H71458, H71458 yu71a06.s1 Homo sapiens cDNA clone 239218 3'. 587 e-166
 AA291045, AA291045 zt19a08.r1 Soares ovary tumor NbHOT Homo s... 563 e-159
 H71587, H71587 yu71a06.r1 Homo sapiens cDNA clone 239218 5'. 543 e-153
 AA035172, AA035172 zk28g05.s1 Soares pregnant uterus NbHPU Ho... 523 e-147
 AA164764, AA164764 zp01g09.r1 Stratagene ovarian cancer (#937... 517 e-145
 AA297001, AA297001 EST112550 Adipose tissue, white II Homo sa... 502 e-140
 AA296816, AA296816 EST112381 Aorta endothelial cells Homo sap... 500 e-139
 AA769090, AA769090 oa74e12.s1 NCI_CGAP_GCB1 Homo sapiens cDNA... 494 e-138
 H54447, H54447 yq91f04.s1 Homo sapiens cDNA clone 203167 3'. 438 e-121
 H54537, H54537 yq91f04.r1 Homo sapiens cDNA clone 203167 5'. 436 e-120
 AI049757, AI049757 an26g03.x1 Gessler Wilms tumor Homo sapien... 430 e-119

AA033583, AA033583 zk21b12.r1 Soares pregnant uterus NbHPU Ho... 422 e-116
D61748, HUM205G02B Human aorta cDNA 5'-end GEN-205G02. 412 e-113
AA148635, AA148635 zl26d10.r1 Soares pregnant uterus NbHPU Ho... 377 e-102
AA148636, AA148636 zl26d10.s1 Soares pregnant uterus NbHPU Ho... 373 e-101
AA025637, AA025637 ze90d11.r1 Soares fetal heart NbHH19W Homo... 371 e-101
AA932620, AA932620 oo61h04.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 365 4e-99
AA385594, AA385594 EST99296 Thyroid Homo sapiens cDNA 5' end 339 2e-91
AA361957, AA361957 EST71295 T-cell lymphoma Homo sapiens cDNA... 289 2e-76
AA383998, AA383998 EST97483 Thyroid Homo sapiens cDNA 5' end ... 274 1e-71
H22175, H22175 yl38a03.r1 Homo sapiens cDNA clone 160492 5'. 256 3e-66
R50060, R50060 yj59c10.r1 Homo sapiens cDNA clone 153042 5'. 256 3e-66
AA229414, AA229414 nc47f12.r1 NCI_CGAP_Pr3 Homo sapiens cDNA ... 246 3e-63
D20466, HUMGS01440 Human HL60 3'directed MboI cDNA, HUMGS014... 208 6e-52
AA249061, AA249061 ll4438.seq.F Human fetal heart, Lambda ZAP... 168 5e-40
R86758, R86758 yq30f07.s1 Homo sapiens cDNA clone 197317 3'. 147 2e-33
R58025, R58025 F8018 Fetal heart Homo sapiens cDNA clone F801... 101 1e-19
AA371076, AA371076 EST82846 Prostate gland I Homo sapiens cDN... 42 0.081
AA977111, AA977111 oq24c03.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 40 0.32
AA608923, AA608923 af03b04.s1 Soares testis NHT Homo sapiens ... 38 1.3

gb|AA386999|AA386999 vc81b02.r1 Ko mouse embryo 11 5dpc Mus mus... 668 0.0
gb|AA589082|AA589082 vk24a08.r1 Knowles Solter mouse blastocyst... 658 0.0
gb|AA510881|AA510881 vh59c11.r1 Soares mouse mammary gland NbMM... 617 e-175
gb|AA763574|AA763574 vp07e08.r1 Soares mouse mammary gland NbMM... 615 e-174
gb|AA387423|AA387423 vc84b03.r1 Ko mouse embryo 11 5dpc Mus mus... 549 e-155
gb|AA915333|AA915333 vz28f05.r1 Soares 2NbMT Mus musculus cDNA ... 543 e-153
gb|AA816208|AA816208 vp43c10.r1 Barstead mouse irradiated colon... 444 e-123
gb|AA190043|AA190043 mt91h08.r1 Soares mouse lymph node NbMLN M... 424 e-117
gb|AA207393|AA207393 mv89c09.r1 GuayWoodford Beier mouse kidney... 394 e-108
emb|Z31258|MMTEST693 M.musculus expressed sequence tag MTEST693 309 8e-83
gb|AA930143|AA930143 vz52d11.s1 Soares 2NbMT Mus musculus cDNA ... 293 5e-78
gb|AA170612|AA170612 ms92c09.r1 Soares mouse 3NbMS Mus musculus... 287 3e-76
gb|AA762238|AA762238 vw58h02.r1 Soares mouse mammary gland NMLM... 266 1e-69
gb|AA689028|AA689028 vs02c12.r1 Barstead mouse irradiated colon... 264 4e-69
gb|AA959938|AA959938 vw58h02.s1 Soares mouse mammary gland NMLM... 240 6e-62
dbj|D18511|MUSGS01569 Mouse 3'-directed cDNA, MUSGS01569, clon... 172 1e-41
gb|AA474393|AA474393 vd57g07.r1 Knowles Solter mouse blastocyst... 100 1e-19
gb|W97165|W97165 mf90g05.r1 Soares mouse embryo NbME13.5 14.5 M... 74 8e-12
gb|AA512077|AA512077 vj43f05.r1 Stratagene mouse skin (#937313)... 62 3e-08
gb|AA794521|AA794521 vu68e07.r1 Stratagene mouse skin (#937313)... 54 8e-06
gb|AA155454|AA155454 mn38h12.r1 Beddington mouse embryonic regi... 48 5e-04
gb|W91000|W91000 mf83f06.r1 Soares mouse embryo NbME13.5 14.5 M... 40 0.12

gb|AA219917|AA219917 mv62f05.r1 Soares mouse 3NME12 5 Mus muscu... 38 0.45
 gb|AA529349|AA529349 vi35f08.r1 Beddington mouse embryonic regi... 36 1.8
 gb|AA754855|AA754855 vu51e08.r1 Soares mouse mammary gland NbMM... 36 1.8

gb|AA850379|AA850379 EST193146 Normalized rat ovary, Bento Soar... 569 e-161
 gb|W63375|W63375 TgESTzy68g02.r1 TgME49 Tachyzoite cDNA Toxopla... 394 e-108
 gb|AA946379|AA946379 EST201878 Normalized rat lung, Bento Soare... 353 5e-96
 gb|AA964427|AA964427 UI-R-E1-gp-a-08-0-UI.s1 UI-R-E1 Rattus nor... 335 1e-90
 gb|AA849599|AA849599 EST192366 Normalized rat muscle, Bento Soa... 307 3e-82
 gb|AA849595|AA849595 EST192362 Normalized rat muscle, Bento Soa... 307 3e-82
 gb|AA850378|AA850378 EST193145 Normalized rat ovary, Bento Soar... 278 3e-73
 gb|AA957389|AA957389 UI-R-E1-fu-b-04-0-UI.s1 UI-R-E1 Rattus nor... 157 6e-37
 gb|AI012981|AI012981 EST207432 Normalized rat spleen, Bento Soa... 147 6e-34
 dbj|C48357|C48357 C.elegans cDNA clone yk469b2 : 5' end, single... 40 0.10
 gb|AA440444|AA440444 LD15290.5prime LD Drosophila melanogaster ... 36 1.6
 dbj|C22690|C22690 Rice cDNA, partial sequence (S5274_4A) 36 1.6
 gb|AA697626|AA697626 HL02895.5prime HL Drosophila melanogaster ... 36 1.6
 gb|AA550136|AA550136 1244m3 gmbPfHB3.1. G. Roman Reddy Plasmodi... 36 1.6
 gb|T43579|T43579 6842 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 36 1.6
 gb|AI030501|AI030501 UI-R-C0-jc-g-02-0-UI.s1 UI-R-C0 Rattus nor... 36 1.6
 gb|AA056876|AA056876 SWMFCA987SK Brugia malayi microfilaria cDN... 36 1.6
 gb|AA440689|AA440689 LD15550.5prime LD Drosophila melanogaster ... 36 1.6

SEQ ID NO:561

emb|Z47552|HSFMO3 H.sapiens mRNA for flavin-containing monooxyg... 44 0.10
 gb|U39966|HSFMO3G7 Homo sapiens flavin containing monooxygenase... 44 0.10
 emb|AL021026|HS127D3 Homo sapiens DNA sequence from PAC 127D3 o... 44 0.10
 gb|U35007|CPU35007 Carcharhinus plumbeus Ig lambda light chain ... 44 0.10
 gb|U35008|CPU35008 Carcharhinus plumbeus Ig lambda light chain ... 44 0.10
 dbj|D85068|RICT3A Rice transposable element T3 gene and ret... 42 0.40
 dbj|D63711|RICT3 Rice transposon T3 DNA, complete sequence 42 0.40
 gb|U01657|U01657 Carcharhinus plumbeus Ig lambda-chain gene. co... 42 0.40
 emb|Z92540|HS179I15A Human DNA sequence from PAC 179I15, BRCA2 ... 40 1.6
 dbj|AB001569|AB001569 Carrot DNA for transposon Tdc1 40 1.6
 gb|AE000613|HPAE000613 Helicobacter pylori section 91 of 134 of... 40 1.6
 emb|X07985|DMCUT Drosophila cut locus mRNA for homeodomain-cont... 40 1.6
 gb|AC005217|AC005217 Homo sapiens chromosome 5, P1 clone 1047D6... 40 1.6

HUMAN ESTs

gb|AA401219|AA401219 zv63a03.r1 Soares total fetus Nb2HF8 9w Ho... 993 0.0
 gb|H69371|H69371 yu19h09.r1 Homo sapiens cDNA clone 234305 5' s... 44 0.049
 gb|N62576|N62576 za13d10.s1 Homo sapiens cDNA clone 292435 3' s... 42 0.19
 gb|W77763|W77763 zd69c06.r1 Soares fetal heart NbHH19W Homo sap... 40 0.77
 gb|R14832|R14832 yf93g05.r1 Homo sapiens cDNA clone 30203 5'. 40 0.77
 gb|T90524|T90524 yd40a04.s1 Homo sapiens cDNA clone 110670 3' s... 38 3.0
 gb|R91887|R91887 yq04c09.r1 Homo sapiens cDNA clone 195952 5'. 38 3.0
 gb|AA586935|AA586935 nn68h03.s1 NCI_CGAP_Lar1 Homo sapiens cDNA... 38 3.0
 gb|T46987|T46987 yb12a07.s1 Homo sapiens cDNA clone 70932 3' co... 38 3.0
 gb|AA853975|AA853975 aj51f09.s1 Soares testis NHT Homo sapiens ... 38 3.0
 gb|T97059|T97059 ye50e01.r1 Homo sapiens cDNA clone 121176 5'. 38 3.0
 gb|AA883119|AA883119 am15h02.s1 Soares NFL T GBC S1 Homo sapien... 38 3.0
 gb|AA860074|AA860074 ak45b06.s1 Soares testis NHT Homo sapiens ... 38 3.0
 gb|AA889618|AA889618 ak28f06.s1 Soares_testis_NHT Homo sapiens ... 38 3.0

gb|AA230450|AA230450 mv73c06.r1 Soares mouse 3NME12 5 Mus muscu... 38 1.1
 gb|AA058041|AA058041 mj58e08.r1 Soares mouse embryo NbME13.5 14... 38 1.1
 gb|AA152953|AA152953 mq54a03.r1 Soares 2NbMT Mus musculus cDNA ... 38 1.1
 gb|W34414|W34414 ma98b07.r1 Soares mouse p3NMF19.5 Mus musculus... 38 1.1
 gb|AA465969|AA465969 ve90c06.s1 Knowles Solter mouse 2 cell Mus... 38 1.1
 gb|AA261173|AA261173 mz62b11.r1 Soares mouse lymph node NbMLN M... 38 1.1
 gb|AA238109|AA238109 mw97b05.r1 Soares mouse NML Mus musculus c... 38 1.1
 dbj|C86549|C86549 Mus musculus fertilized egg cDNA 3'-end seque... 38 1.1
 gb|AI048677|AI048677 ub29g09.r1 Soares 2NbMT Mus musculus cDNA ... 38 1.1
 dbj|D77921|MUSC1A08 Mouse embryonal carcinoma F9 cell cDNA, C1A08 38 1.1
 gb|AA396183|AA396183 vb45e04.r1 Soares mouse lymph node NbMLN M... 38 1.1
 gb|AA465898|AA465898 vc62f12.s1 Knowles Solter mouse 2 cell Mus... 36 4.3
 gb|AA041869|AA041869 mj05b12.r1 Soares mouse embryo NbME13.5 14... 36 4.3
 gb|AA637824|AA637824 vr21f11.r1 Barstead mouse myotubes MPLRB5 ... 36 4.3
 gb|W82563|W82563 mf05g06.r1 Soares mouse p3NMF19.5 Mus musculus... 36 4.3
 gb|AA389972|AA389972 vb30e03.r1 Soares mouse lymph node NbMLN M... 36 4.3
 gb|AA396253|AA396253 vb45f08.r1 Soares mouse lymph node NbMLN M... 36 4.3
 gb|AA920907|AA920907 vy84f04.r1 Stratagene mouse macrophage (#9... 36 4.3
 gb|AA517166|AA517166 vh98h05.r1 Barstead mouse myotubes MPLRB5 ... 36 4.3
 gb|AA433599|AA433599 vf47a05.r1 Soares mouse NbMH Mus musculus ... 36 4.3
 gb|AA867252|AA867252 vx25c01.r1 Soares 2NbMT Mus musculus cDNA ... 36 4.3
 dbj|C85619|C85619 Mus musculus fertilized egg cDNA 3'-end seque... 36 4.3
 gb|AA260277|AA260277 va93g05.r1 Soares mouse 3NME12 5 Mus muscu... 36 4.3
 gb|AA172548|AA172548 mt04g11.r1 Soares mouse 3NbMS Mus musculus... 36 4.3
 gb|AA266879|AA266879 mz96a02.r1 Soares mouse lymph node NbMLN M... 36 4.3
 gb|AA473019|AA473019 vd43e06.r1 Barstead MPLRB1 Mus musculus cD... 36 4.3

gb|R47549|R47549 SW3ICA119SK *Brugia malayi* infective larva cDNA... 40 0.24
 gb|H32651|H32651 EST107947 Rat PC-12 cells, untreated *Rattus* sp... 38 0.96
 gb|AA955987|AA955987 UI-R-E1-fb-f-06-0-UI.s1 UI-R-E1 *Rattus* nor... 38 0.96
 gb|AA819638|AA819638 UI-R-A0-an-f-03-0-UI.s1 UI-R-A0 *Rattus* nor... 38 0.96
 gb|AI010914|AI010914 EST205365 Normalized rat muscle, Bento Soa... 38 0.96
 gb|AA893199|AA893199 EST197002 Normalized rat kidney, Bento Soa... 38 0.96
 gb|AA945176|AA945176 EST200675 Normalized rat liver, Bento Soar... 38 0.96
 gb|R95272|R95272 SWOvL3CA167SK *Onchocerca volvulus* infective la... 36 3.8
 gb|AA917208|AA917208 ka05f02.s1 *Onchocerca volvulus* infective l... 36 3.8
 dbj|C62023|C62023 *C.elegans* cDNA clone yk249d5 : 5' end, single... 36 3.8
 gb|AI013322|AI013322 EST207997 Normalized rat spleen, Bento Soa... 36 3.8
 gb|AI043280|AI043280 TENU0920 *T. cruzi* epimastigote normalized ... 36 3.8
 gb|AI009422|AI009422 EST203873 Normalized rat heart, Bento Soar... 36 3.8
 gb|AI012655|AI012655 EST207106 Normalized rat placenta, Bento S... 36 3.8
 dbj|C62878|C62878 *C.elegans* cDNA clone yk296d4 : 5' end, single... 36 3.8
 gb|AA915818|AA915818 SWOvL3CA1269SK *Onchocerca volvulus* infecti... 36 3.8
 gb|W00009|W00009 TgESTzy75b07.r1 TgRH Tachyzoite cDNA *Toxoplasma*... 36 3.8
 gb|AA943503|AA943503 EST199002 Normalized rat brain, Bento Soar... 36 3.8
 gb|AA956933|AA956933 UI-R-E1-fl-b-08-0-UI.s1 UI-R-E1 *Rattus* nor... 36 3.8
 gb|H54977|H54977 HHU16a *Sorghum bicolor* cv. TX430 *Sorghum bicol*... 36 3.8

SEQ ID NO:562

gb|AC000112|HSAC000112 Human PAC clone DJ149P21, complete seque... 44 0.082
 gb|U50197|CELF25E2 *Caenorhabditis elegans* cosmid F25E2. 44 0.082
 dbj|AB007727|AB007727 *Arabidopsis thaliana* genomic DNA, chromos... 44 0.082
 gb|U02562|BSU02562 *Bacillus subtilis* N-acetylglucosaminidase (l... 42 0.32
 dbj|D45048|BACORFX *Bacillus subtilis* gene for beta-N-acetylgluc... 42 0.32
 emb|Z70683|CEF13B12 *Caenorhabditis elegans* cosmid F13B12, compl... 40 1.3
 emb|AL023828|CEY17G7B *Caenorhabditis elegans* cosmid Y17G7B, com... 40 1.3
 gb|U39740|CELZC64 *Caenorhabditis elegans* cosmid ZC64. 40 1.3
 gb|AF006490|AF006490 *Gossypium hirsutum* adenine nucleotide tran... 40 1.3
 emb|AL010170|PFSC03098 *Plasmodium falciparum* DNA *** SEQUENCING... 40 1.3
 gb|U53701|GHU53701 *Gossypium hirsutum* alcohol dehydrogenase 2d ... 40 1.3

HUMAN ESTs

gb|AA670455|AA670455 ae62h05.s1 Stratagene lung carcinoma 93721... 852 0.0
 gb|AA251062|AA251062 zs07c10.r1 NCI_CGAP GCB1 Homo sapiens cDNA... 795 0.0

gb|AA669916|AA669916 ag42h08.sl Jia bone marrow stroma Homo sap... 638 0.0
 gb|AA300058|AA300058 EST12665 Uterus tumor I Homo sapiens cDNA ... 587 e-165
 gb|AA664277|AA664277 ac08c05.sl Stratagene HeLa cell s3 937216 ... 549 e-154
 gb|AA373224|AA373224 EST85230 HSC172 cells I Homo sapiens cDNA ... 529 e-148
 gb|AA225705|AA225705 nc10b05.r1 NCI_CGAP_Pr1 Homo sapiens cDNA ... 515 e-144
 gb|W27883|W27883 39b10 Human retina cDNA randomly primed sublib... 484 e-134
 gb|R24643|R24643 yh36g05.r1 Homo sapiens cDNA clone 131864 5'. 438 e-121
 gb|N93137|N93137 zb28h06.sl Homo sapiens cDNA clone 304955 3'. 432 e-119
 gb|AA250933|AA250933 zs07d01.sl NCI_CGAP_GCB1 Homo sapiens cDNA... 426
 e-117
 gb|AA216370|AA216370 nc10b05.sl NCI_CGAP_Pr1 Homo sapiens cDNA ... 398 e-109
 gb|H26939|H26939 yl64g01.r1 Homo sapiens cDNA clone 163056 5'. 394 e-108
 gb|H30169|H30169 yo58g09.r1 Homo sapiens cDNA clone 182176 5'. 394 e-108
 gb|W38854|W38854 zb28h06.r1 Soares parathyroid tumor NbHPA Homo... 359 5e-97
 gb|AA602297|AA602297 np25a11.sl NCI_CGAP_Pr22 Homo sapiens cDNA... 281 1e-73
 gb|AA167151|AA167151 zp06e09.r1 Stratagene ovarian cancer (#937... 256 6e-66
 gb|AA172387|AA172387 zo99d03.sl Stratagene ovarian cancer (#937... 234 2e-59
 gb|AA173748|AA173748 zo99d03.r1 Stratagene ovarian cancer (#937... 224 2e-56
 gb|T83979|T83979 yd66a11.sl Homo sapiens cDNA clone 113180 3'. 220 3e-55
 dbj|D61540|HUM415A08B Human fetal brain cDNA 5'-end GEN-415A08. 194 2e-47
 gb|N45148|N45148 yv25a05.r1 Homo sapiens cDNA clone 243728 5'. 165 2e-38
 gb|AA642960|AA642960 60f07.sl NCI_CGAP_Lym3 Homo sapiens cDNA... 147 4e-33
 gb|R90980|R90980 yp93a03.r1 Homo sapiens cDNA clone 194956 5' s... 40 0.62
 gb|AA521500|AA521500 aa73h08.sl NCI_CGAP_GCB1 Homo sapiens cDNA... 40 0.62
 gb|H82921|H82921 yq46h10.sl Homo sapiens cDNA clone 198883 3' s... 40 0.62
 gb|AA294871|AA294871 EST100023 Pancreas tumor I Homo sapiens cD... 38 2.4
 dbj|D63191|HUM503F11B Human placenta cDNA 5'-end GEN-503F11. 38 2.4
 gb|AA211096|AA211096 zq89g01.sl Stratagene hNT neuron (#937233)... 38 2.4

gb|AA840137|AA840137 ud01e08.r1 Soares mouse uterus NMPu Mus mu... 383 e-104
 gb|AA145994|AA145994 mr13h04.r1 Soares mouse 3NbMS Mus musculus... 345 3e-93
 gb|AA146365|AA146365 mr05d05.r1 Soares mouse 3NbMS Mus musculus... 236 2e-60
 gb|AA203902|AA203902 mu60f02.r1 Soares mouse lymph node NbMLN M... 236 2e-60
 gb|AA204516|AA204516 mu66c10.r1 Soares mouse lymph node NbMLN M... 182 2e-44
 gb|AA137343|AA137343 mq80g08.r1 Stratagene mouse melanoma (#937... 52 6e-05
 gb|AA174717|AA174717 ms67a01.r1 Soares mouse 3NbMS Mus musculus... 48 0.001
 gb|W34073|W34073 ma85d10.r1 Soares mouse p3NMF19.5 Mus musculus... 48 0.001
 gb|AA289493|AA289493 vb36b01.r1 Soares mouse lymph node NbMLN M... 48 0.001
 gb|AA177700|AA177700 mt33e12.r1 Soares mouse 3NbMS Mus musculus... 48 0.001
 gb|AA146021|AA146021 mr13e03.r1 Soares mouse 3NbMS Mus musculus... 48 0.001
 gb|AA155352|AA155352 mn43d09.r1 Beddington mouse embryonic regi... 46 0.004
 gb|AA880874|AA880874 vx33b02.r1 Stratagene mouse lung 937302 Mu... 42 0.056

gb|AA590520|AA590520 vi54b08.r1 Beddington mouse embryonic regi... 38 0.88
 gb|AA596629|AA596629 vm56e06.r1 Stratagene mouse Tcell 937311 M... 38 0.88
 dbj|D76657|MUS75H09 Mouse embryonal carcinoma F9 cell cDNA, 75H09 38 0.88
 gb|AA050336|AA050336 mj12f05.r1 Soares mouse embryo NbME13.5 14... 38 0.88
 gb|AA120196|AA120196 mn35a12.r1 Beddington mouse embryonic regi... 38 0.88
 gb|W85267|W85267 mf42c06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.5
 gb|AA239372|AA239372 my38f03.r1 Barstead mouse pooled organs MP... 36 3.5
 gb|AA497891|AA497891 vi73c07.r1 Stratagene mouse testis (#93730... 36 3.5
 gb|AA673053|AA673053 vn45e05.r1 Barstead mouse myotubes MPLRB5 ... 36 3.5
 emb|Z36324|MM224 M.musculus mRNA (clone 224) for expressed sequ... 36 3.5
 gb|AI021128|AI021128 ub01f06.r1 Soares mouse mammary gland NbMM... 36 3.5
 gb|AA403424|AA403424 mz56f07.r1 Barstead mouse pooled organs MP... 36 3.5
 gb|W66683|W66683 me23g11.r1 Soares mouse embryo NbME13.5 14.5 M... 36 3.5
 gb|AA689022|AA689022 vs02c03.r1 Barstead mouse irradiated colon... 36 3.5
 gb|AA574590|AA574590 vn63h11.r1 Barstead mouse proximal colon M... 36 3.5

dbj|C90696|C90696 Dictyostelium discoideum slug cDNA, clone SSJ634 38 0.78
 gb|AA269052|AA269052 MA1MA052.AA3 S. mansoni adult Lambda Zap S... 38 0.78
 gb|AA998786|AA998786 UI-R-C0-im-e-11-0-UI.s1 UI-R-C0 Rattus nor... 38 0.78
 gb|H33464|H33464 EST109494 Rat PC-12 cells, NGF-treated (9 days... 38 0.78
 gb|AA390721|AA390721 LD09459.5prime LD Drosophila melanogaster ... 36 3.1
 dbj|C83908|C83908 Dictyostelium discoideum slug cDNA, clone SSA567 36 3.1
 gb|AA202425|AA202425 LD02606.5prime LD Drosophila melanogaster ... 36 3.1
 gb|AI030951|AI030951 UI-R-C0-jf-d-04-0-UI.s1 UI-R-C0 Rattus nor... 36 3.1
 gb|N60251|N60251 TgESTzy11d04.r1 TgRH Tachyzoite cDNA Toxoplasma... 36 3.1
 gb|AA246875|AA246875 LD05855.5prime LD Drosophila melanogaster ... 36 3.1
 gb|AA803682|AA803682 GM13955.5prime GM Drosophila melanogaster ... 36 3.1
 gb|AA997528|AA997528 UI-R-C0-hw-h-11-0-UI.s1 UI-R-C0 Rattus nor... 36 3.1
 gb|AA695197|AA695197 GM02389.5prime GM Drosophila melanogaster ... 36 3.1
 gb|AA567339|AA567339 HL01077.5prime HL Drosophila melanogaster ... 36 3.1
 gb|AA950648|AA950648 LD30547.5prime LD Drosophila melanogaster ... 36 3.1

SEQ ID NO:563

substantially identical to D86956

SEQ ID NO:564

gb|AC004505|AC004505 Homo sapiens chromosome 20, P1 clone 86C1 ... 176 1e-41
 gb|S78798|S78798 1-phosphatidylinositol-4-phosphate 5-kinase is... 115 4e-23
 gb|U48696|HSU48696 Human mariner-like element-containing mRNA, ... 115 4e-23
 gb|U66300|LEU66300 Lycopersicon esculentum heat shock protein (... 115 4e-23
 gb|AF045432|AF045432 Danio rerio stem cell leukemia protein (ta... 111 6e-22
 emb|Z97178|BVRNAEF2 Beta vulgaris cDNA for elongation factor 2 107 9e-21
 gb|U39066|MMU39066 Murine MAP kinase kinase 6c mRNA, complete cds. 101 6e-19
 gb|U37573|XXU37573 Shuttle expression vector pBKCMV. 96 4e-17
 gb|AF033097|AF033097 Avena sativa nonphototropic hypocotyl 1 (N... 90 2e-15
 gb|AF027174|AF027174 Arabidopsis thaliana cellulose synthase ca... 86 3e-14
 gb|U65376|CFU65376 Canis familiaris rod photoreceptor transduci... 84 1e-13
 gb|AF033565|AF033565 Mus musculus cdc2/CDC28-like protein kinas... 82 5e-13
 emb|Z49980|HS2AMCP H.sapiens mRNA for ets-like protein (clone 7... 82 5e-13
 emb|AJ001103|LLARCAB Lactococcus lactis arcA and arcB genes 80 2e-12
 gb|U52868|CFU52868 Canis familiaris retinal cyclic-GMP phosphod... 80 2e-12
 gb|G29058|G29058 chicken STS ADL368 76 3e-11
 gb|G29060|G29060 chicken STS ADL352 76 3e-11
 gb|U34048|HDU34048 Haemophilus ducreyi hemoglobin-binding prote... 76 3e-11
 gb|U44386|SLU44386 Solanum lycopersicum heat shock protein (TFH... 68 8e-09
 gb|S83098|S83098 ribosomal protein S3 [Ambystoma mexicanum=Mexi... 66 3e-08
 gb|U48697|HSU48697 Human mariner-like element-containing mRNA, ... 60 2e-06
 gb|AF033096|AF033096 Avena sativa nonphototropic hypocotyl 1 (N... 60 2e-06
 emb|X99051|LLATTMSAT L.lagopus ATT microsatellite, locus LLST1 58 8e-06
 gb|U41811|HAU41811 Homarus americanus beta-I tubulin mRNA, comp... 46 0.029
 emb|X99055|LLCAMSAT1 L.lagopus CA microsatellite, locus LLSD5 44 0.12
 emb|X65215|BTMISATN B.taurus microsatellite DNA (624bp) 44 0.12
 gb|AE001023|AE001023 Archaeoglobus fulgidus section 84 of 172 o... 42 0.46
 emb|X80164|HSPDCM4 H.salinarium phage dcm4 Virus DNA 42 0.46
 emb|X87859|MTCMAJ12S C.major mitochondrial gene for 12S ribosom... 42 0.46
 emb|X87861|MTCPAL12S C.pallidus mitochondrial gene for 12S ribo... 42 0.46
 gb|L13767|STMSEC101A Streptomyces lividans sec101 gene, 5' end p... 42 0.46
 emb|Y08962|OSTRAMBPR O.sativa mRNA for transmembrane protein >g... 40 1.8
 gb|S65686|S65686 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 gb|J02871|HUMCP45IV Human lung cytochrome P450 (IV subfamily) B... 40 1.8
 dbj|D10450|HUMRTVE Human genomic DNA, retrovirus-like element 40 1.8
 gb|S65683|S65683 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 gb|L14950|PIGALDRED Sus scrofa aldose reductase mRNA, complete ... 40 1.8
 gb|S65693|S65693 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 gb|S65694|S65694 {multiple cloning sites, vector} [bacteriophag... 40 1.8
 emb|AJ223292|SPAJ3292 Streptococcus pyogenes SOD gene, complete... 40 1.8
 gb|U25846|HAU25846 Homarus americanus clone LOB5 farnesoic acid... 40 1.8
 emb|X16699|HSP450P2 Human mRNA for cytochrome P-450HP 40 1.8
 gb|U37100|HSU37100 Homo sapiens aldose reductase-like peptide m... 40 1.8

HUMAN ESTs

gb|AA305996|AA305996 EST177003 Jurkat T-cells VI Homo sapiens c... 942 0.0
 gb|AA975279|AA975279 oq36e08.s1 NCI_CGAP_GC4 Homo sapiens cDNA ... 900 0.0
 gb|AA426359|AA426359 zw11b02.r1 Soares NhHMPu S1 Homo sapiens c... 868 0.0
 gb|AA424296|AA424296 zv90b08.r1 Soares NhHMPu S1 Homo sapiens c... 749 0.0
 gb|AA632259|AA632259 np67d04.s1 NCI_CGAP_Br2 Homo sapiens cDNA ... 730 0.0
 gb|H80377|H80377 yu59e01.r1 Homo sapiens cDNA clone 230424 5'. 658 0.0
 gb|AA515175|AA515175 ng68f10.s1 NCI_CGAP_Lip2 Homo sapiens cDNA... 615 e-174
 gb|AA351770|AA351770 EST59616 Infant brain Homo sapiens cDNA 5'... 611 e-172
 gb|AA426522|AA426522 zw11b02.s1 Soares NhHMPu S1 Homo sapiens c... 587 e-165
 gb|AA676220|AA676220 zi22a12.s1 Soares fetal liver spleen 1NFLS... 585 e-165
 gb|R35132|R35132 yg60e09.r1 Homo sapiens cDNA clone 36874 5'. 579 e-163
 gb|H80280|H80280 yu59e01.s1 Homo sapiens cDNA clone 230424 3'. 579 e-163
 gb|H81145|H81145 yu60e01.r1 Homo sapiens cDNA clone 230520 5'. 561 e-157
 gb|AA311105|AA311105 EST18187 Heart I Homo sapiens cDNA 5' end 533 e-149
 gb|AA380530|AA380530 EST93691 Supt cells Homo sapiens cDNA 5' end 527 e-147
 gb|H81050|H81050 yu60e01.s1 Homo sapiens cDNA clone 230520 3'. 500 e-139
 gb|AA460005|AA460005 zx49g07.s1 Soares testis NHT Homo sapiens ... 482 e-134
 gb|AA076450|AA076450 zm91d12.r1 Stratagene ovarian cancer (#937... 466 e-129
 gb|N43873|N43873 yy43e09.r1 Homo sapiens cDNA clone 274024 5'. 452 e-125
 gb|AA076451|AA076451 zm91d12.s1 Stratagene ovarian cancer (#937... 418 e-115
 gb|AA907095|AA907095 ol03b12.s1 NCI_CGAP_Lu5 Homo sapiens cDNA ... 414 e-113
 gb|W01027|W01027 za56g07.r1 Soares fetal liver spleen 1NFLS Hom... 262 1e-67
 gb|AA127183|AA127183 zn29d11.r1 Stratagene neuroepithelium NT2R... 222 1e-55
 gb|H65491|H65491 yr56a08.s1 Homo sapiens cDNA clone 209270 3'. 222 1e-55
 gb|N48543|N48543 yy49d08.r1 Homo sapiens cDNA clone 276879 5'. 210 4e-52
 gb|R32579|R32579 yh54h06.r1 Homo sapiens cDNA clone 133595 5'. 194 2e-47
 gb|AA247827|AA247827 j0778.seq.F Human fetal heart, Lambda ZAP ... 117 5e-24
 N84048, (many others similar, but smaller)

gb|AA589598|AA589598 vl49d08.s1 Stratagene mouse skin (#937313)... 398 e-109
 gb|AA647465|AA647465 vq82f02.s1 Knowles Solter mouse 2 cell Mus... 385 e-105
 gb|AA510284|AA510284 vh58f02.r1 Soares mouse mammary gland NbMM... 345 4e-93
 gb|AA028696|AA028696 ml12e12.r1 Soares mouse p3NMF19.5 Mus musc... 307 9e-82
 gb|N28081|N28081 MDB1409R Mouse brain, Stratagene Mus musculus ... 244 1e-62
 gb|AA177452|AA177452 mt24c12.r1 Soares mouse 3NbMS Mus musculus... 226 3e-57
 gb|N28080|N28080 MDB1409 Mouse brain, Stratagene Mus musculus c... 226 3e-57
 dbj|C88310|C88310 Mus musculus fertilized egg cDNA 3'-end seque... 226 3e-57
 gb|AA763786|AA763786 vo99g12.r1 Soares mouse mammary gland NbMM... 94 2e-17
 gb|AA667535|AA667535 vv18b12.r1 Stratagene mouse heart (#937316... 40 0.31
 gb|AA208274|AA208274 mv96a01.r1 GuayWoodford Beier mouse kidney... 38 1.2

gb|AA444814|AA444814 vg50e04.r1 Soares mouse mammary gland NbMM... 38 1.2
 gb|AA763341|AA763341 vw53b12.r1 Soares mouse mammary gland NMLM... 38 1.2
 gb|AA110827|AA110827 mp57a12.r1 Soares 2NbMT Mus musculus cDNA ... 38 1.2
 gb|AA691932|AA691932 vt06b04.r1 Barstead mouse myotubes MPLRB5 ... 38 1.2
 gb|W77233|W77233 me61f11.r1 Soares mouse embryo NbME13.5 14.5 M... 38 1.2
 gb|AA072872|AA072872 mm80g08.r1 Stratagene mouse embryonic carc... 38 1.2
 gb|AA980630|AA980630 ua43f05.r1 Soares mouse mammary gland NbMM... 36 4.9
 gb|AA065522|AA065522 ml54d09.r1 Stratagene mouse testis (#93730... 36 4.9
 gb|AA982398|AA982398 uh07b08.r1 Soares mouse hypothalamus NMHy ... 36 4.9
 gb|W62610|W62610 md58c06.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9
 gb|AA286651|AA286651 vb79b02.r1 Soares mouse 3NME12 5 Mus muscu... 36 4.9
 gb|AA399772|AA399772 vd70g05.r1 Beddington mouse embryonic regi... 36 4.9
 gb|AA510475|AA510475 vg32h08.r1 Soares mouse mammary gland NbMM... 36 4.9
 gb|AA109064|AA109064 ml63g02.r1 Stratagene mouse testis (#93730... 36 4.9
 gb|AA033485|AA033485 mi42c08.r1 Soares mouse embryo NbME13.5 14... 36 4.9
 gb|W57221|W57221 md59g10.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9
 gb|AA467106|AA467106 vd98b04.r1 Soares mouse NbMH Mus musculus ... 36 4.9
 gb|W97470|W97470 mf95a11.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9
 gb|AA606917|AA606917 vm91c05.r1 Knowles Solter mouse blastocyst... 36 4.9
 dbj|C78330|C78330 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 36 4.9
 gb|AA013753|AA013753 mh26h12.r1 Soares mouse placenta 4NbMP13.5... 36 4.9
 gb|AA145240|AA145240 mrl2a03.r1 Soares mouse 3NbMS Mus musculus... 36 4.9
 gb|AA245533|AA245533 mx03c11.r1 Soares mouse NML Mus musculus c... 36 4.9
 gb|AA770893|AA770893 vt13a08.r1 Barstead mouse myotubes MPLRB5 ... 36 4.9
 dbj|C79987|C79987 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 36 4.9
 gb|AA014027|AA014027 mh24a12.r1 Soares mouse placenta 4NbMP13.5... 36 4.9
 dbj|C89051|C89051 Mus musculus early blastocyst cDNA, clone 01B... 36 4.9
 gb|AA058308|AA058308 mj59e09.r1 Soares mouse embryo NbME13.5 14... 36 4.9
 gb|AA673826|AA673826 vu08h10.r1 Barstead mouse myotubes MPLRB5 ... 36 4.9
 gb|AA637080|AA637080 vn07h04.r1 Knowles Solter mouse blastocyst... 36 4.9
 gb|W44292|W44292 mc80c07.r1 Soares mouse embryo NbME13.5 14.5 M... 36 4.9

gb|AA955972|AA955972 UI-R-E1-ff-d-10-0-UI.s1 UI-R-E1 Rattus nor... 159 4e-37
 gb|AA957275|AA957275 UI-R-E1-fq-f-08-0-UI.s1 UI-R-E1 Rattus nor... 157 2e-36
 emb|Z84031|SSZ84031 S.scrofa mRNA; expressed sequence tag (5'; ... 111 9e-23
 gb|AF041408|AF041408 Fragaria x ananassa clone FA110b 96 5e-18
 gb|AA933116|AA933116 SWBmL3SA048T3 Brugia malayi L3 subtracted ... 58 1e-06
 gb|AA933363|AA933363 SWBmL3SA615T3 Brugia malayi L3 subtracted ... 52 7e-05
 gb|AA660164|AA660164 00001 MtrHE Medicago truncatula cDNA 5' si... 50 3e-04
 gb|N37420|N37420 18647 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 44 0.018
 gb|H35981|H35981 14503 Lambda-PRL2 Arabidopsis thaliana cDNA cl... 44 0.018
 gb|AA882627|AA882627 TENS0198 T. cruzi epimastigote normalized ... 44 0.018
 gb|AI026481|AI026481 TENU0693 T. cruzi epimastigote normalized ... 42 0.070
 gb|AA946369|AA946369 EST201868 Normalized rat lung. Bento Soare... 42 0.070

gb|AI010371|AI010371 EST204822 Normalized rat lung, Bento Soare... 42 0.070
 gb|AI010257|AI010257 EST204708 Normalized rat lung, Bento Soare... 42 0.070
 dbj|D39318|RICR3325A Rice cDNA, partial sequence (R3325_1A). 40 0.28
 gb|U40140|OSU40140 Oryza sativa clone pFDRRC22 mRNA sequence. 40 0.28
 gb|AI009132|AI009132 EST203583 Normalized rat embryo, Bento Soa... 40 0.28
 dbj|D47291|RICS12574A Rice cDNA, partial sequence (S12574_1A). 40 0.28
 dbj|D47316|RICS12613A Rice cDNA, partial sequence (S12613_1A). 40 0.28
 gb|T42265|T42265 5528 Lambda-PRL2 Arabidopsis thaliana cDNA clo... 40 0.28
 dbj|D47631|RICS13239A Rice cDNA, partial sequence (S13239_1A). 40 0.28
 gb|AI013513|AI013513 EST208188 Normalized rat spleen, Bento Soa... 40 0.28
 gb|AA751980|AA751980 96AS0896 Rice Immature Seed Lambda ZAPII c... 40 0.28
 gb|AA660165|AA660165 00002 MtRHE Medicago truncatula cDNA 5' si... 40 0.28
 emb|Z34868|ATTS3597 A. thaliana transcribed sequence; clone FAF... 40 0.28
 dbj|D39131|RICR2302A Rice cDNA, partial sequence (R2302_1A). 40 0.28
 gb|AA963968|AA963968 UI-R-C0-gs-b-05-0-UI.s1 UI-R-C0 Rattus nor... 40 0.28
 gb|AA866346|AA866346 UI-R-A0-bm-a-05-0-UI.s1 UI-R-A0 Rattus nor... 40 0.28
 gb|AI044437|AI044437 UI-R-C1-js-e-06-0-UI.s1 UI-R-C1 Rattus nor... 40 0.28
 dbj|D41811|RICS4634A Rice cDNA, partial sequence (S4634_1A). 40 0.28
 dbj|C19261|C19261 Rice cDNA, partial sequence (E10176_1A) 40 0.28
 dbj|D48409|RICS14588A Rice cDNA, partial sequence (S14588_1A). 40 0.28
 dbj|C26556|C26556 Rice cDNA, partial sequence (C12586_1A) 40 0.28
 dbj|D47831|RICS13548A Rice cDNA, partial sequence (S13548_1A). 40 0.28
 dbj|C72152|C72152 Rice cDNA, partial sequence (E1094_3A) 40 0.28
 dbj|D46553|RICS11305A Rice cDNA, partial sequence (S11305_2A). 40 0.28
 gb|AI028926|AI0289 (and many others of similar score)

SEQ ID NO:565

emb|X68308|OOLPLIP O.ovis mRNA for lipoprotein lipase 40 1.2
 gb|AE000660|HUA000660 Homo sapiens T-cell receptor alpha delta... 40 1.2
 emb|AL022333|HS474112 Human DNA sequence *** SEQUENCING IN PROG... 38 4.6
 emb|Z12618|CFTRG C.fasciculata gene encoding trypanothione redu... 38 4.6
 gb|M81651|HUMSEMIIB Human semenogelin II (SEMGII) gene, complet... 38 4.6
 gb|M96980|HUMMYT1A Homo sapiens myelin transcription factor 1 (... 38 4.6
 gb|U89688|ACU89688 Acanthamoeba castellanii myosin-I binding pr... 38 4.6
 gb|AC002497|AC002497 Human Cosmid g1940a142 from 7q31.3, comple... 38 4.6
 gb|M81652|HUMSMNGLN Homo sapiens semenogelin II mRNA, complete ... 38 4.6
 gb|M25665|HUMNCF1A Human neutrophil cytosol factor 1 (NCF-47k) ... 38 4.6
 gb|M73325|TRFTRPREDC Crithidia fasciculata trypanothione reduct... 38 4.6
 gb|M73324|TRFTRPREDB Crithidia fasciculata trypanothione reduct... 38 4.6
 emb|X92589|MMSEMIIGN M.mulatta semenogelin II gene 38 4.6
 emb|Z47556|HSSG1SG2 H.sapiens genes for semenogelin I and semen... 38 4.6
 gb|AC004753|AC004753 Homo sapiens chromosome 16. cosmid clone R... 38 4.6
 gb|M55067|HUMNADPHO Human 47-kD autosomal chronic granulomatous... 38 4.6

gb|M73323|TRFTRPRED A Crithidia fasciculata trypanothione reduct... 38 4.6

HUMAN ESTs

gb|R11942|R11942 yf54c05.r1 Homo sapiens cDNA clone 25950 5'. 656 0.0
gb|AA366384|AA366384 EST77326 Pancreas tumor III Homo sapiens c... 470 e-130
gb|T12566|T12566 CHR90086 Homo sapiens genomic clone P94_24 5' ... 133 5e-29
gb|R37032|R37032 yf54c05.s1 Homo sapiens cDNA clone 25950 3'. 44 0.036
gb|AA661650|AA661650 nv02h12.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA261982|AA261982 zs20d03.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA588219|AA588219 no24c11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA250891|AA250891 zs06c06.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA244177|AA244177 nc05a02.r1 NCI_CGAP_Pr1 Homo sapiens cDNA ... 38 2.2
gb|AA715147|AA715147 nv10d05.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA659887|AA659887 nv03a10.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA627890|AA627890 nq70a08.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA603596|AA603596 np27b11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA613738|AA613738 np25h09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA715248|AA715248 nv10h06.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AI038487|AI038487 ow25d12.x1 Soares parathyroid tumor_NbHPA ... 38 2.2
gb|AA252786|AA252786 zs26f10.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA287819|AA287819 zs50h04.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA564176|AA564176 nj04c08.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA643870|AA643870 np26h07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA280371|AA280371 zt05f07.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|R00687|R00687 ye78h08.r1 Homo sapiens cDNA clone 123903 5' s... 38 2.2
gb|AA587820|AA587820 nj06h05.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA588443|AA588443 no22c11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA568385|AA568385 nl88f06.s1 NCI_CGAP_Co10 Homo sapiens cDNA... 38 2.2
gb|AA281831|AA281831 zt06c08.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|AA700438|AA700438 zj74b08.s1 Soares fetal liver spleen 1NFLS... 38 2.2
gb|AA689530|AA689530 ns66e07.r1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA688300|AA688300 nv14a09.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA687962|AA687962 nv13h04.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA526586|AA526586 ni96f11.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA642589|AA642589 nq73f04.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA541594|AA541594 ni89g07.s1 NCI_CGAP_Pr21 Homo sapiens cDNA... 38 2.2
gb|AA278713|AA278713 zs76h02.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2
gb|T58661|T58661 ya94a07.r1 Homo sapiens cDNA clone 69300 5' si... 38 2.2
gb|AA689473|AA689473 ns66e07.s1 NCI_CGAP_Pr22 Homo sapiens cDNA... 38 2.2
gb|AA459023|AA459023 aa26a09.r1 NCI_CGAP_GCB1 Homo sapiens cDNA... 38 2.2

dbj|C76752|C76752 Mus musculus 3.5-dpc blastocyst cDNA 3'-end s... 60 2e-07
 gb|AA123048|AA123048 mn32g01.r1 Beddington mouse embryonic regi... 36 3.2
 gb|AA616529|AA616529 vo10e01.r1 Barstead mouse myotubes MPLRB5 ... 36 3.2
 gb|AA254370|AA254370 va13h09.r1 Soares mouse lymph node NbMLN M... 36 3.2
 gb|AA537288|AA537288 vk46c04.r1 Soares mouse mammary gland NbMM... 36 3.2
 gb|AA462365|AA462365 vg74c05.r1 Soares mouse NbMH Mus musculus ... 36 3.2
 gb|AA589462|AA589462 vl47g07.s1 Stratagene mouse skin (#937313)... 36 3.2
 gb|AA968017|AA968017 uh06h10.r1 Soares mouse hypothalamus NMHy ... 36 3.2

 dbj|C93868|C93868 Dictyostelium discoideum slug cDNA, clone SSL809 36 2.8
 gb|AA531984|AA531984 TgESTzz46b06.r1 TgME49 invivo Bradyzoite c... 36 2.8
 gb|N60418|N60418 TgESTzy07a10.r1 TgRH Tachyzoite cDNA Toxoplasma... 36 2.8
 gb|H32045|H32045 EST106774 Rat PC-12 cells, untreated Rattus sp... 36 2.8
 gb|AA956789|AA956789 UI-R-E1-fr-h-01-0-UI.s1 UI-R-E1 Rattus nor... 36 2.8
 gb|H33275|H33275 EST109117 Rat PC-12 cells, NGF-treated (9 days... 36 2.8
 gb|AA531938|AA531938 TgESTzz45b08.r1 TgME49 invivo Bradyzoite c... 36 2.8
 dbj|D41507|RICS4044A Rice cDNA, partial sequence (S4044_1A). 36 2.8
 gb|AA799411|AA799411 EST188908 Normalized rat heart, Bento Soar... 36 2.8
 gb|AA519671|AA519671 TgESTzz27c10.r1 TgME49 invivo Bradyzoite c... 36 2.8
 dbj|D40678|RICS2786A Rice cDNA, partial sequence (S2786_1A). 36 2.8
 gb|AA012430|AA012430 TgESTzz22b12.r1 TgME49cDNA Toxoplasma gond... 36 2.8
 dbj|D40551|RICS2612A Rice cDNA, partial sequence (S2612_1A). 36 2.8
 gb|AI008452|AI008452 EST202903 Normalized rat embryo, Bento Soa... 36 2.8
 dbj|D41253|RICS3620A Rice cDNA, partial sequence (S3620_1A). 36 2.8
 gb|AA923843|AA923843 UI-R-A1-dr-f-04-0-UI.s1 UI-R-A1 Rattus nor... 36 2.8
 gb|AA799410|AA799410 EST188907 Normalized rat heart, Bento Soar... 36 2.8

We claim:

1. A method of diagnosing a disorder characterized by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule, comprising:

contacting a biological sample isolated from a subject with an agent that specifically binds to the nucleic acid molecule, an expression product thereof, or a fragment of an expression product thereof complexed with an HLA molecule, wherein the nucleic acid molecule is a NA Group 1 nucleic acid molecule, and

determining the interaction between the agent and the nucleic acid molecule or the expression product as a determination of the disorder.

2. The method of claim 1, wherein the agent is selected from the group consisting of

(a)

a nucleotide acid molecule comprising NA group 1 nucleic acid molecules

or a fragment thereof,

(b)

a nucleic acid molecule comprising NA group 3 nucleic acid molecules or a fragment thereof,

(c)

a nucleic acid molecule comprising NA group 17 nucleic acid molecules or a fragment thereof,

(d)

an antibody that binds to an expression product of NA group 1 nucleic acids,

(e)

an antibody that binds to an expression product of NA group 3 nucleic acids.

(f)

an antibody that binds to an expression product of NA group 17 nucleic acids,

5

(g)

and agent that binds to a complex of an HLA molecule and a fragment of an expression product of a NA group 1 nucleic acid,

10

(h)

an agent that binds to a complex of an HLA molecule and a fragment of an expression product of a NA group 3 nucleic acid, and

15

(I)

an agent that binds to a complex of an HLA molecule and a fragment of an expression product of a NA group 17 nucleic acid.

3.

The method of claim 1, wherein the disorder is characterized by expression of a plurality of human cancer associated antigen precursors and wherein the agent is a plurality of agents, each of which is specific for a different human cancer associated antigen precursor, and wherein said plurality of agents is at least 2, at least 3, at least 4, at least 4, at least 6, at least 7, or at least 8, at least 9 or at least 10 such agents.

20

25 4.

The method of claims 1-3, wherein the agent is specific for a human cancer associated antigen precursor that is a breast, a gastric, a lung, a prostate, a renal or a colon cancer associated antigen precursor.

5.

A method for determining regression, progression or onset of a condition characterized by expression of abnormal levels of a protein encoded by a nucleic acid molecule that is a NA Group 1 molecule, comprising

30

monitoring a sample, from a patient who has or is suspected of having the condition, for a parameter selected from the group consisting of

(I)

5 the protein,

(ii)

a peptide derived from the protein,

10 (iii)

an antibody which selectively binds the protein or peptide, and

(iv)

15 cytolytic T cells specific for a complex of the peptide derived from the protein and an MHC molecule,

as a determination of regression, progression or onset of said condition.

6. The method of claim 5, wherein the sample is a body fluid, a body effusion or a tissue.

20

7. The method of claim 5, wherein the step of monitoring comprises contacting the sample with a detectable agent selected from the group consisting of

(a)

25 an antibody which selectively binds the protein of (I), or the peptide of (ii),

(b)

a protein or peptide which binds the antibody of (iii), and

30

(c)

a cell which presents the complex of the peptide and MHC molecule of
(iv).

5

8. The method of claim 7, wherein the antibody, the protein, the peptide or the cell is labeled with a radioactive label or an enzyme.

9. The method of claim 5, comprising assaying the sample for the peptide.

10

10. The method of claim 5, wherein the nucleic acid molecule is a NA Group 3 molecule.

11. The method of claim 5, wherein the nucleic acid molecule is a NA Group

15 11 molecule.

12. The method of claim 5, wherein the nucleic acid molecule is a NA Group 12 molecule.

20 13. The method of claim 5, wherein the nucleic acid molecule is a NA Group 13 molecule.

14. The method of claim 5, wherein the nucleic acid molecule is a NA Group 14 molecule.

25

15. The method of claim 5, wherein the nucleic acid molecule is a NA Group 15 molecule.

16. The method of claim 5, wherein the nucleic acid molecule is a NA Group

30 16 molecule.

17. The method of claim 5, wherein the protein is a plurality of proteins, the parameter is a plurality of parameters, each of the plurality of parameters being specific for a different of the plurality of proteins.

5 18. A pharmaceutical preparation for a human subject comprising
an agent which when administered to the subject enriches selectively the
presence of complexes of an HLA molecule and a human cancer associated antigen, and
a pharmaceutically acceptable carrier, wherein the human cancer
associated antigen is a fragment of a human cancer associated antigen precursor encoded by a
10 nucleic acid molecule comprises a NA Group 1 molecule.

19. The pharmaceutical preparation of claim 18, wherein the agent comprises
a plurality of agents, each of which enriches selectively in the subject complexes of an HLA
molecule and a different human cancer associated antigen.

15

20. The pharmaceutical preparation of claim 19, wherein the plurality is at
least two, at least three, at least four or at least 5 different such agents.

21. The pharmaceutical preparation of claim 18, wherein the nucleic acid
20 molecule is a NA Group 3 nucleic acid molecule.

22. The pharmaceutical preparation of claim 18, wherein the agent is selected
from the group consisting of

(1) an isolated polypeptide comprising the human cancer associated
25 antigen, or a functional variant thereof,

(2) an isolated nucleic acid operably linked to a promoter for expressing
the isolated polypeptide, or functional variant thereof,

(3) a host cell expressing the isolated polypeptide, or functional variant
thereof, and

(4) isolated complexes of the polypeptide, or functional variant thereof, and an HLA molecule.

23. The pharmaceutical preparation of claims 18-22, further comprising an
5 adjuvant.

24. The pharmaceutical preparation of claim 18, wherein the agent is a cell expressing an isolated polypeptide comprising the human cancer associated antigen or a functional variant thereof, and wherein the cell is nonproliferative.

10 25. The pharmaceutical preparation of claim 18, wherein the agent is a cell expressing an isolated polypeptide comprising the human cancer associated antigen or a functional variant thereof, and wherein the cell expresses an HLA molecule that binds the polypeptide.

15 26. The pharmaceutical preparation of claim 18, wherein the agent is at least two, at least three, at least four or at least five different polypeptides, each coding for a different human cancer associated antigen or functional variant thereof.

20 27. The pharmaceutical preparation of claim 18, wherein the agent is a PP Group 2 polypeptide.

28. The pharmaceutical preparation of claim 18, wherein the agent is a PP Group 3 polypeptide or a PP Group 4 polypeptide.

25 29. The pharmaceutical preparation of claim 25, wherein the cell expresses one or both of the polypeptide and HLA molecule recombinantly.

30 30. The pharmaceutical preparation of claim 25, wherein the cell is nonproliferative.

31. A composition comprising
an isolated agent that binds selectively a PP Group 1 polypeptide.

32. The composition of matter of claim 31, wherein the agent binds selectively
5 a PP Group 3 polypeptide.

33. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 11 polypeptide.

10 34. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 12 polypeptide.

35. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 13 polypeptide.

15 36. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 14 polypeptide.

37. The composition of matter of claim 31, wherein the agent binds selectively
20 a PP Group 15 polypeptide.

38. The composition of matter of claim 31, wherein the agent binds selectively
a PP Group 16 polypeptide.

25 39. The composition of claims 31-38, wherein the agent is a plurality of
different agents that bind selectively at least two, at least three, at least four, or at least five
different such polypeptides.

40. The composition of claims 31-38, wherein the agent is an antibody.

30

41. The composition of claim 39, wherein the agent is an antibody.

42. A composition of matter comprising
a conjugate of the agent of claims 31-41 and a therapeutic or diagnostic
5 agent.

43. The composition of matter of claim 42, wherein the conjugate is of the
agent and a therapeutic or diagnostic that is a toxin.

10 44. A pharmaceutical composition comprising an isolated nucleic acid
molecule selected from the group consisting of:

(1)

NA Group 1 molecules, and

15 (2)

NA Group 2 molecules, and a pharmaceutically acceptable carrier.

45. The pharmaceutical composition of claim 44, wherein the isolated nucleic
acid molecule comprises a NA Group 3 or NA Group 4 molecule.

20 46. The pharmaceutical composition of claim 44, wherein the isolated nucleic
acid molecule comprises at least two isolated nucleic acid molecules coding for two different
polypeptides, each polypeptide comprising a different human cancer associated antigen.

25 47. The pharmaceutical composition of claims 44-46 further comprising an
expression vector with a promoter operably linked to the isolated nucleic acid molecule.

48. The pharmaceutical composition of claims 44-46 further comprising a host
cell recombinantly expressing the isolated nucleic acid molecule.

30

49. A pharmaceutical composition comprising
an isolated polypeptide comprising a PP Group 1 or a PP Group 2
polypeptide, and
a pharmaceutically acceptable carrier.

5

50. The pharmaceutical composition of claim 49, wherein the isolated
polypeptide comprises a PP Group 3 or a PP Group 4 polypeptide.

10 51. The pharmaceutical composition of claim 49, wherein the isolated
polypeptide comprises at least two different polypeptides, each comprising a different human
cancer associated antigen.

52. The pharmaceutical composition of claim 49, wherein the isolated
15 polypeptides are PP Group 11 polypeptides or HLA binding fragments thereof.

53. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP
Group 12 polypeptides or HLA binding fragments thereof.

20

54. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP Group 13 polypeptides or HLA binding fragments thereof.

55. The pharmaceutical composition of claim 49, wherein the isolated
25 polypeptides are PP Group 14 polypeptides or HLA binding fragments thereof.

56. The pharmaceutical composition of claim 49, wherein the isolated
polypeptides are PP Group 15 polypeptides or HLA binding fragments thereof.

30

57. The pharmaceutical composition of claim 49, wherein the isolated polypeptides are PP Group 16 polypeptides or HLA binding fragments thereof.

58. The pharmaceutical composition of claims 49-57, further comprising an
5 adjuvant.

59. An isolated nucleic acid molecule comprising a NA Group 3 molecule.

60. An isolated nucleic acid molecule comprising a NA Group 4 molecule.

10 61. The isolated nucleic acid molecule of claims 59-60, wherein the molecule is a Group 11 molecule or a fragment thereof.

62. The isolated nucleic acid molecule of claims 59-60, wherein the molecule
15 is a Group 12 molecule or a fragment thereof.

63. The isolated nucleic acid molecule of claims 59-60, wherein the molecule is a Group 13 molecule or a fragment thereof.

20 64. The isolated nucleic acid molecule of claims 59-60, wherein the molecule is a Group 14 molecule or a fragment thereof.

65. The isolated nucleic acid molecule of claims 59-60, wherein the molecule is a Group 15 molecule or a fragment thereof.

25 66. The isolated nucleic acid molecule of claims 59-60, wherein the molecule is a Group 16 molecule or a fragment thereof.

67. An isolated nucleic acid molecule selected from the group consisting of

(a)

a fragment of a nucleic acid selected from the group of nucleic acid
consisting of SEQ ID NOs presenting nucleic acid sequences among SEQ ID NOs. 1-816, of
5 sufficient length to represent a sequence unique within the human genome, and identifying a
nucleic acid encoding a human cancer associated antigen precursor,

(b)

complements of (a),

10

provided that the fragment includes a sequence of contiguous nucleotides
which is not identical to any sequence selected from the sequence group consisting of

(1) sequences having the GenBank accession numbers of Table 1

(correct?),

15

(2) complements of (1), and

(3) fragments of (1) and (2).

68. The isolated nucleic acid molecule of claim 67, wherein the sequence of
contiguous nucleotides is selected from the group consisting of:

20

(1)

at least two contiguous nucleotides nonidentical to the sequence group,

(2)

at least three contiguous nucleotides nonidentical to the sequence group,

(3)

25

at least four contiguous nucleotides nonidentical to the sequence group,

(4)

at least five contiguous nucleotides nonidentical to the sequence group,

(5)

30

at least six contiguous nucleotides nonidentical to the sequence group,

(6)

at least seven contiguous nucleotides nonidentical to the sequence group.

69. The isolated nucleic acid molecule of claim 67, wherein the fragment has a size selected from the group consisting of at least: 8 nucleotides, 10 nucleotides, 12 nucleotides, 14 nucleotides, 16 nucleotides, 18 nucleotides, 20, nucleotides, 22 nucleotides, 24 nucleotides, 26 nucleotides, 28 nucleotides, 30 nucleotides, 50 nucleotides, 75 nucleotides, 100 nucleotides, and 200 nucleotides.

70. The isolated nucleic acid molecule of claim 67, wherein the molecule encodes a polypeptide which, or a fragment of which, binds a human HLA receptor or a human antibody.

71. An expression vector comprising an isolated nucleic acid molecule of claims 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 or 70 operably linked to a promoter.

72. An expression vector comprising a nucleic acid operably linked to a promoter, wherein the nucleic acid is a NA Group 2 molecule.

73. An expression vector comprising a NA Group 1 or Group 2 molecule and a nucleic acid encoding an HLA molecule.

74. A host cell transformed or transfected with an expression vector of claims 71, 72, or 73.

75. A host cell transformed or transfected with an expression vector of claim 71 or claim 72 and further comprising a nucleic acid encoding HLA.

76. An isolated polypeptide encoded by the isolated nucleic acid molecule of claims 59, 60, 61, 62, 63, 64, 65, or 66.

77. A fragment of the polypeptide of claim 76 which is immunogenic.

78. The fragment of claim 77, wherein the fragment, or a portion of the fragment, binds HLA or a human antibody.

5

79. An isolated fragment of a human cancer associated antigen precursor which, or portion of which, binds HLA or a human antibody, wherein the precursor is encoded by a nucleic acid molecule that is a NA Group 1 molecule.

10 80. The fragment of claim 79, wherein the fragment is part of a complex with HLA.

81. The fragment of claim 79, wherein the fragment is between 8 and 12 amino acids in length.

15

82. An isolated polypeptide comprising a fragment of the polypeptide of claim 76 of sufficient length to represent a sequence unique within the human genome and identifying a polypeptide that is a human cancer associated antigen precursor.

20 83. A kit for detecting the presence of the expression of a human cancer associated antigen precursor comprising
a pair of isolated nucleic acid molecules each of which consists essentially
of a molecule selected from the group consisting of

25 (a) a 12-32 nucleotide contiguous segment of the nucleotide sequence of any of the NA Group 1 molecules and

(b) complements of ("a"), wherein the contiguous segments are nonoverlapping.

30

84. The kit of claim 83, wherein the pair of isolated nucleic acid molecules is constructed and arranged to selectively amplify an isolated nucleic acid molecule that is a NA Group 3 molecule.

5 85. A method for treating a subject with a disorder characterized by expression of a human cancer associated antigen precursor, comprising administering to the subject an amount of an agent, which enriches selectively in the subject the presence of complexes of an HLA molecule and a human cancer associated antigen, effective to ameliorate the disorder, wherein the human cancer associated
10 antigen is a fragment of a human cancer associated antigen precursor encoded by a nucleic acid molecule selected from the group consisting of

(a)

a nucleic acid molecule comprising NA group 1 nucleic acid molecules.

15

(b)

a nucleic acid molecule comprising NA group 3 nucleic acid molecules,

(c)

20

a nucleic acid molecule comprising NA group 17 nucleic acid molecules.

86. The method of claim 85, wherein the disorder is characterized by expression of a plurality of human cancer associated antigen precursors and wherein the agent is a plurality of agents, each of which enriches selectively in the subject the presence of complexes
25 of an HLA molecule and a different human cancer associated antigen.

87. The method of claim 86, wherein the plurality is at least 2, at least 3, at least 4, or at least 5 such agents.

88. The method of claims 85-87, wherein the agent is an isolated polypeptide selected from the group consisting of PP Group 1, PP Group 2, PP Group 3, PP Group 4, PP Group 5, PP Group 6, PP Group 7, PP Group 8, PP Group 9, PP Group 10, PP Group 11, PP Group 12, PP Group 13, PP Group 14, PP Group 15, PP Group 16 and PP Group 17 polypeptides.

89. The method of claims 85-88, wherein the disorder is cancer.

90. A method for treating a subject having a condition characterized by expression of a human cancer associated antigen precursor in cells of the subject, comprising:

(I)

removing an immunoreactive cell containing sample from the subject,

(ii)

contacting the immunoreactive cell containing sample to the host cell under conditions favoring production of cytolytic T cells against a human cancer associated antigen which is a fragment of the precursor,

(iii)

introducing the cytolytic T cells to the subject in an amount effective to lyse cells which express the human cancer associated antigen, wherein the host cell is transformed or transfected with an expression vector comprising an isolated nucleic acid molecule operably linked to a promoter, the isolated nucleic acid molecule being selected from the group of nucleic acid molecules consisting of NA Group 1, NA Group 2, NA Group 3, NA Group 4, NA Group 5, NA Group 6, NA Group 7, NA Group 8, NA Group 9, NA Group 10, NA Group 11, NA Group 12, NA Group 13, NA Group 14, NA Group 15, NA Group 16, and NA Group 17.

91. The method of claim 90, wherein the host cell recombinantly expresses an HLA molecule which binds the human cancer associated antigen.

92. The method of claim 90, wherein the host cell endogenously expresses an
5 HLA molecule which binds the human cancer associated antigen.

93. A method for treating a subject having a condition characterized by expression of a human cancer associated antigen precursor in cells of the subject, comprising:

10 (I)
identifying a nucleic acid molecule expressed by the cells associated with said condition, wherein said nucleic acid molecule is a NA Group 1 molecule

(ii)
15 transfecting a host cell with a nucleic acid selected from the group consisting of

(a) the nucleic acid molecule identified,
20

(b)
a fragment of the nucleic acid identified which includes a segment coding
for a human cancer associated antigen,
25

(c)
deletions, substitutions or additions to (a) or (b), and
30

(d)
degenerates of (a), (b), or (c);

(iii)

5 culturing said transfected host cells to express the transfected nucleic acid molecule, and;

(iv)

10 introducing an amount of said host cells or an extract thereof to the subject effective to increase an immune response against the cells of the subject associated with the condition.

94. The method of claim 93, further comprising:

15

(a)

identifying an MHC molecule which presents a portion of an expression product of the nucleic acid molecule,

20 wherein the host cell expresses the same MHC molecule as identified in (a) and wherein the host cell presents an MHC binding portion of the expression product of the nucleic acid molecule.

95. The method of claim 93, wherein the immune response comprises a B-cell
25 response or a T cell response.

96. The method of claim 95, wherein the response is a T-cell response which
comprises generation of cytolytic T-cells specific for the host cells presenting the portion of the
expression product of the nucleic acid molecule or cells of the subject expressing the human
30 cancer associated antigen.

97. The method of claim 93, wherein the nucleic acid molecule is a NA Group 3 molecule.

98. The method of claims 93 or 94, further comprising treating the host cells
5 to render them non-proliferative.

99. A method for treating or diagnosing or monitoring a subject having a condition characterized by expression of an abnormal amount of a protein encoded by a nucleic acid molecule that is a NA Group 1 molecule, comprising
10 administering to the subject an antibody which specifically binds to the protein or a peptide derived therefrom, the antibody being coupled to a therapeutically useful agent, in an amount effective to treat the condition.

100. The method of claim 99, wherein the antibody is a monoclonal antibody.
15

101. The method of claim 100, wherein the monoclonal antibody is a chimeric antibody or a humanized antibody.

102. A method for treating a condition characterized by expression in a subject
20 of abnormal amounts of a protein encoded by a nucleic acid molecule that is a NA Group 1 nucleic acid molecule, comprising administering to a subject a pharmaceutical composition of any one of claims 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 47, and 58 in an amount effective to prevent, delay the onset of, or inhibit the condition in
25 the subject.

103. The method of claim 102, wherein the condition is cancer.

104. The method of claims 102-103, further comprising first identifying that
30 the subject expresses in a tissue abnormal amounts of the protein.

105. A method for treating a subject having a condition characterized by expression of abnormal amounts of a protein encoded by a nucleic acid molecule that is a NA Group 1 nucleic acid molecule, comprising

(I) identifying cells from the subject which express abnormal amounts of
5 the protein;
(ii) isolating a sample of the cells;
(iii) cultivating the cells, and
(iv) introducing the cells to the subject in an amount effective to provoke
an immune response against the cells.

106. The method of claim 105, wherein the cells express a protein selected
from the group
consisting of a PP Group 11 protein, a PP Group 12 protein, a PP Group 13 protein, PP Group 14
protein, a PP Group 15 protein and a PP Group 16 protein.

107. The method of claim 105, further comprising rendering the cells non-
proliferative, prior to introducing them to the subject.

108. A method for treating a pathological cell condition characterized by
20 aberrant expression of a protein encoded by a nucleic acid molecule that is a NA Group 1 nucleic
acid molecule, comprising

administering to a subject in need thereof an effective amount of an agent
which inhibits the expression or activity of the protein.

25 109. The method of claim 108, wherein the agent is an inhibiting antibody
which selectively binds to the protein and wherein the antibody is a monoclonal antibody, a
chimeric antibody or a humanized antibody.

110. The method of claim 108, wherein the agent is an antisense nucleic acid
30 molecule which selectively binds to the nucleic acid molecule which encodes the protein.

111. The method of claim 108, wherein the nucleic acid molecule is a NA Group 3 nucleic acid molecule.

112. A composition of matter useful in stimulating an immune response to a plurality of a protein encoded by nucleic acid molecules that are NA Group 1 molecules, comprising

a plurality of peptides derived from the amino acid sequences of the proteins, wherein the peptides bind to one or more MHC molecules presented on the surface of the cells which express an abnormal amount of the protein.

113. The composition of matter of claim 112, wherein at least a portion of the plurality of peptides bind to MHC molecules and elicit a cytolytic response thereto.

114. The composition of matter of claim 113, further comprising an adjuvant.

115. The composition of matter of claim 114, wherein said adjuvant is a saponin, GM-CSF, or an interleukin.

116. An isolated antibody which selectively binds to a complex of:

(i)

a peptide derived from a protein encoded by a nucleic acid molecule that is a NA Group 1 molecule and

(ii)

and an MHC molecule to which binds the peptide to form the complex, wherein the isolated antibody does not bind to (i) or (ii) alone.

117. The antibody of claim 116, wherein the antibody is a monoclonal antibody, a chimeric antibody or a humanized antibody.

NY-LU-12	KEESPPPKVVNPLIGLLCEYGGSDYEEEEEEQTPPPQPRTAQPQKREEQTKKENEEDKLTDMNKLACLLCRRQFPNKEVL	970
LUCA15	PELVRNGDEENPLKRGVAAYSGSDSDNEE.....ELVERLESEEEKLADWKMACLLCRRQFPNKDAL	662
DXS8237E	DLPKLASDDRPSPPRGLVAAYSGESDSEE.....EQERGGPEREEKLTDWQKLACLLCRRQFPPSKEAL	233
NY-LU-12	IKHQQLSDLPKQNLIEIHRKTKQSEQELAYLERRERE.GKFKGRGNDRRREKLQSFDSPEKRRRIKYSRETDSD..DRKLVDKEDID	1050
LUCA15	VRHQQLSDLHKQNMNDIYRRSRRLSEQELEALELRERE.MKYRDRAAERREKYGIPEPPEPKRKKQFDAGTV..NYEQPTKDGID	742
DXS8237E	IRHQQLSGLHKQNLIEIHRRAHLSENELEALEKNDMEQMKYRDRAAERREKYGIPEPPEPKRKKYGGISTASVDFEQPTRDGLG	316
NY-LU-12	TSSKGGCVQQAATGWRKGTGLGYGHPGLASSEEAEGMRGSPSVGASGRTSKRQSNETYRDAVRRVMFARYKELD	1123
LUCA15	HSNIGNKMLQAMGWREGSGLGRKKCGITAPIEAQVRLKGAGLGAKGSAYGLSGADSYKDAVRKAMFARFIEME	815
DXS8237E	SDNIGSRMLQAMGWKEGSGGLGRKKQGIIVTPIEAQTRVRGSLGARGSSYGVTTSTESYKETLHKTMVTRFNEAQ	389

Fig. 1

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AAGAGAGCGGGCGTGGAGGCTTCGCCCCCTAGGTA CTGCTATAACAGAAATTGGTATAAAAAGGATTACTTGTGGGGCCCTCTTGATAAAAAGA 100
 GATGTGGGGGATTCGACCTGCTAAACAGAACTGCACCTTTTCGTGGGAGCCCAAGAAAGTTTGTCTCCGGTGGAAACAGGGATTATCCTCCTCCT 200
 1 M M G D S R P A N R T G P Y R G S Q F E R F A P S N H R D Y P P P
 CCCCTTAAGAGTCATGCTCAAGAGACACACTCTGGCAACTTTCCTGGCAGAGATTACACTTCCCTTTGATTTCCAGGGGCATTCGGGGCCTCTTTTGCAA 300
 34 P I K S R A Q E R D S G R F P G R D S L P F D F Q G H S G P P F A
 ATGTAGAGGAGCATTCCTTCAGCTATGGAGCTAGAGACGACCGCATGCTGACTATCGAGGAGGGAGGGACCTGGACATGATTTCAAGGGGGGAGATT 400
 67 H V E E H S F S Y G A R Q G G P H G D Y R G G K G P G R D F R G G D F
 TTCGTCTCTGATTTCCAGAGCAGAGATTATCACAGTTTCGACTTCAGGGGTAGGAGATACATCTCTGGGATTTTCGGGATAGAGAGACCACCTATG 500
 101 S S S D F G S R D S S Q L D F R G R D T H S G D F R E R E G P P G
 GACTATAGGGGTGGAGAGGGTACTTCTATGGATTATAGAGGTAGGAGGCACCTCATATCACTACAGAGACAGGGATGCTCAGCTCTTGACTTCAGAG 600
 134 D Y R G G D G T S M D Y R G R E A P H H N Y R D R D A H A V D F R
 GTAGGGATGCTCCTCCATCTGACTTCAGGGCGGGGACTTATGATTAGATTTTAGAGGGCCGGGATTCATCCCATGCGATTTTAGGGGAAGGATTT 700
 167 G R D A P P S D F R G R G T Y D L D F R G R D G S R A D F R G R C L
 ATCAGATTTCGATTTTAGGCCACAGAACAGTCCCGTCTGATTTAGGAATAGAGATGTAATCTGATTTGACTTTAGAGACAAAGACGGAACACAAGTA 800
 201 S D L D F R A R E Q S R S D F R N R D V S D L D F R D K D G T Q V
 GACTTTAGAGCGCGAGGTTCAAGTACTACTGATCTAGACTTTTAGGACAGGGATACGCCACATTCAGATTTTCAGAGGTAGACACCGATCTAGGACTGATC 900
 234 D F R G R G S G T T D L D F R D R C T P H S D F R S R H R S R T D
 AGGATTTAGGGGCAGAGCATGGGATCTTGATGGAATTTAAAGATAGGGAGATGCCCCCTCTGGATCCAAATATTTGGATTATCATTCAGCCCTCTAC 1000
 267 Q D F R G R E M G S C M E F K D R E M P P V D P N I L D Y I Q P S T
 ACAAGATAGAGAACAATCTGTGATGAATGTGAACAGGAGAGAAGAATCCACACGACCATACATAGAAAGCCCTGCTTTGGCATTCAGAAAGGAGAA 1100
 301 Q D R R E S G H N V N R R E K S T H D H T I F R P A F G I Q K G K

Fig. 2

334 TTTGAGCATTCAGAAACAAGAGAGAAACACAAAGGTGTAGCCTTTGAACATGAGTCTCCAGCAGACCTTCAGAACAGCCAAAGTCCACTTCAAGACC 1200
 F E H S E T R K G E T G G V A F E H E S P A D F Q N S Q S P V Q D
 367 AAGATAAGTCACAGCTTTCTGGACGTGAAGAGCAGATTTCAGATGCTGGTCTGTCTTAAGAAAGGCGGTCTGGACTTTCTTGGCGGCAAGACACCCGA 1300
 Q D K S Q L S G R K K Q S S D A G L F K E E G G L D F A G R Q D T D
 401 TTACAGAAGCATGGAGTACCGTGATGTGGATCATAGGTGCCAGGAAGCCAGATGTTTGGCTATGGCCAGAGCAAGTCTTTTCCAGAGGGCAAAACTGCC 1400
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Fig. 2 (CONTINUED)

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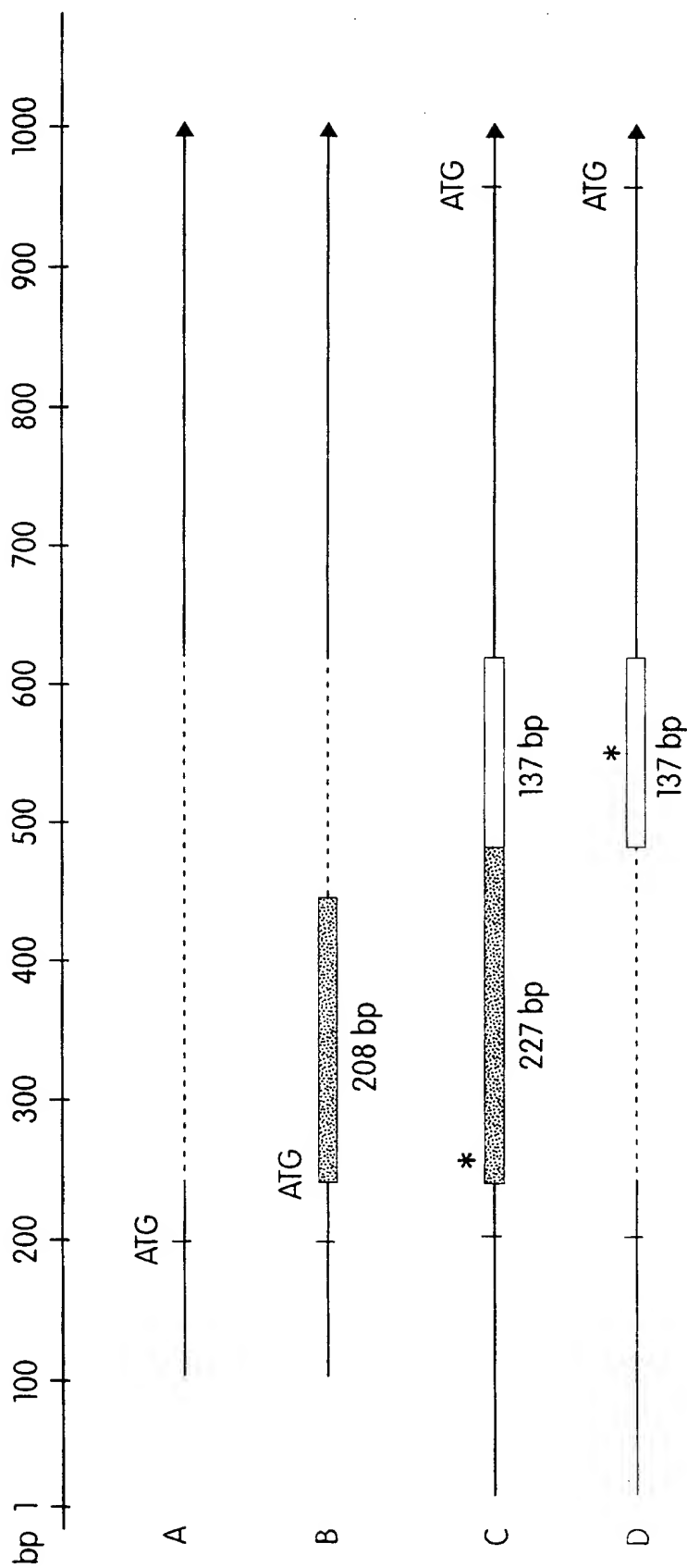
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Fig. 2 (CONTINUED)



TRANSCRIPT VARIANT B

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145
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Q E E R F A P G W...

Fig. 3A

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227bp exon:

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AGAACTGGACCTTTTCGGACTGGGTGAAAGCTTTTCTGCAGCAGTCATGTTGAAAAACCTTGTGTTGACTTTCTT
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Fig. 3B

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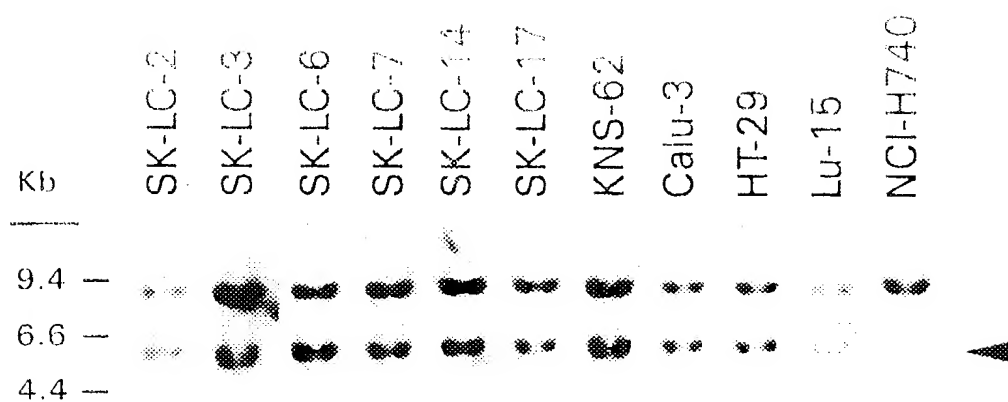


Fig. 4

SUBSTITUTE SHEET (RULE 26)

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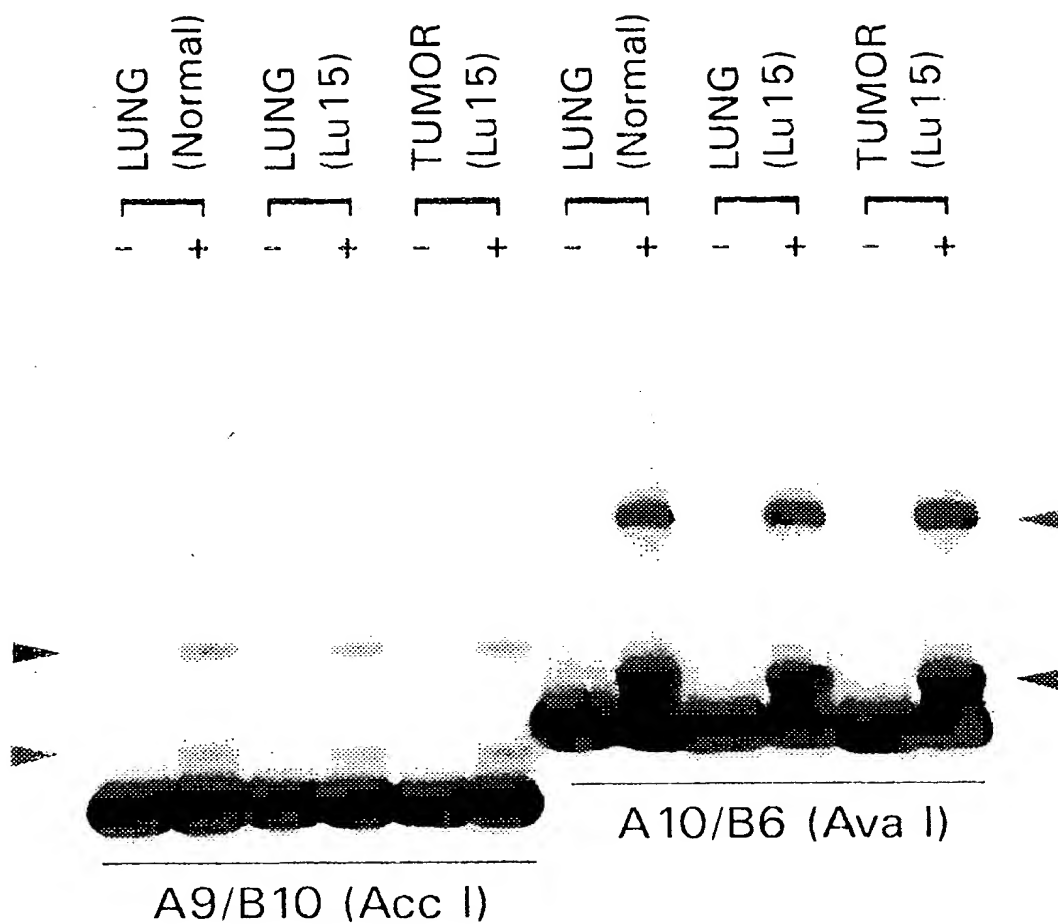


Fig. 5

SUBSTITUTE SHEET (RULE 26)

SEQUENCE LISTING

<110> Ludwig Institute for Cancer Research
Old, Lloyd J.
Scanlan, Matthew J.
Stockert, Elisabeth
Gure, Ali
Chen, Yao-Tseng
Gout, Ivan
O'Hare, Michael
Obata, Yuichi
Pfreundschuh, Michael
Tureci, Ozlem
Sahin, Ugur

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 <211> 1148
 <212> DNA
 <213> Homo Sapiens

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<210> 16

<211> 1113

<212> DNA

<213> Homo Sapiens

<400> 16

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<210> 17

<211> 731

<212> DNA

<213> Homo Sapiens

<400> 17

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<210> 18

<211> 1145

<212> DNA

<213> Homo Sapiens

<400> 18

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<210> 19

<211> 1106

<212> DNA

<213> Homo Sapiens

<400> 19

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<210> 20
 <211> 484
 <212> DNA
 <213> Homo Sapiens

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 tcggcagaag caacnaatta cccacctgcn tnanangata agggataatg aattaccggc 420
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<210> 21
 <211> 355
 <212> DNA
 <213> Homo Sapiens

<400> 21
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<210> 22
 <211> 1070
 <212> DNA
 <213> Homo Sapiens

<400> 22
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<210> 23

<211> 861
 <212> DNA
 <213> Homo Sapiens

<400> 23

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<210> 24
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 <212> DNA
 <213> Homo Sapiens

<400> 24

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<210> 25
 <211> 545
 <212> DNA
 <213> Homo Sapiens

<400> 25

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<210> 26

<211> 374

<212> DNA

<213> Homo Sapiens

<400> 26

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<210> 27

<211> 552

<212> DNA

<213> Homo Sapiens

<400> 27

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<210> 28

<211> 502

<212> DNA

<213> Homo Sapiens

<400> 28

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<210> 29

<211> 537

<212> DNA

<213> Homo Sapiens

<400> 29

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<210> 30

<211> 3872

<212> DNA

<213> Homo Sapiens

<400> 30

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<210> 31

<211> 655

<212> DNA

<213> Homo Sapiens

<400> 31

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<210> 32

<211> 466

<212> DNA

<213> Homo Sapiens

<400> 32

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<210> 33

<211> 293

<212> DNA

<213> Homo Sapiens

<400> 33

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aaacccaaga	gcaatgcagg	ctttaatgca	gatccagcag	gggctacaga	cattagccac	240
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<210> 34

<211> 456

<212> DNA

<213> Homo Sapiens

<400> 34

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tcttgctcaa	aatatccctg	gtcatctttg	agtttagtac	agtctccaaa	atctatatga	420
ggagggaggc	cacagtctat	tggcatacca	aatttt			456

<210> 35

<211> 679

<212> DNA

<213> Homo Sapiens

<400> 35

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<210> 36
 <211> 689
 <212> DNA
 <213> Homo Sapiens

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 atgatggnc ctaggaataa aggtgtttct gagaagtatc gaaagctcgt gtctgcagtt 600
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<210> 37
 <211> 443
 <212> DNA
 <213> Homo Sapiens

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 agaaggagac actgtctcaa aaa 443

<210> 38
 <211> 442
 <212> DNA
 <213> Homo Sapiens

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<210> 39
 <211> 692
 <212> DNA
 <213> Homo Sapiens

<400> 39


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<210> 40

<211> 619

<212> DNA

<213> Homo Sapiens

<400> 40

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<210> 41

<211> 153

<212> PRT

<213> Homo Sapiens

<400> 41

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Pro Ser Val Arg Thr Gln Met Trp Leu Thr Glu Gln Leu Arg Thr Asn
35     40     45
Pro Leu Glu Gly Arg Asn Thr Glu Asp Ser Tyr Ser Leu Ala Pro Trp
50     55     60
Gln Gln Gln Gln Ile Glu Phe Arg Gln Gly Ser Glu Thr Pro Met Gln
65     70     75     80
Val Leu Thr Gly Ser Ser Arg Gln Ser Tyr Ser Pro Gly Tyr Gln Asp
85     90     95
Phe Ser Lys Trp Glu Ser Met Leu Lys Lys Glu Gly Leu Leu Arg Gln
100    105    110
Lys Glu Ile Val Asp Arg Gln Lys Gln Ile Thr His Leu Ile Arg Asp
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130    135    140

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Asp Ser Tyr Val Ala Ser Leu His His
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<210> 42
<211> 95
<212> PRT
<213> Homo Sapiens

<400> 42
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His Val Asn Asn His Ile Tyr Ile Lys Leu Tyr Asn Cys Thr Phe Leu
20 25 30
Thr Ala Leu Ser Gln Val Ala Leu Ser Phe Pro Ser Ile Asn Gly Leu
35 40 45
Ile Phe Val Ser Phe Ala Phe Phe Arg Val Val Asn Ser Tyr Cys Pro
50 55 60
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Leu Gly Glu Phe Ile Phe His Lys Glu Met Glu His Tyr Leu Lys
85 90 95

<210> 43
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<213> Homo Sapiens

<400> 43
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20 25 30
Gly Ile Gly Lys Leu Ser Thr Ala Asp Gly Lys Ala Phe Ala Asp Pro
35 40 45
Glu Val Leu Arg Arg Leu Thr Ser Ser Val Ser Cys Ala Leu Asp Glu
50 55 60
Ala Ala Ala Leu Thr Arg Met Arg Ala Glu Ser Thr Ala Asn Ala Gly
65 70 75 80
Gln Ser Asp Asn Arg Ser Leu Ala Glu Ala Cys Ser Gly Asp Val Ala
85 90 95
Val Arg Lys Leu Leu Ile Glu Gly Arg Ser Val Phe Glu Leu Pro Glu
100 105 110
Glu Gly

<210> 44
<211> 132
<212> PRT
<213> Homo Sapiens

<400> 44
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Val Lys Pro Lys Gln Asp Thr Lys Tyr Asp Leu Ile Leu Asp Glu Gln
20 25 30

Ala Glu Asp Ser Lys Ser Ser His Ser His Thr Ser Lys His Lys Lys
 35 40 45
 Lys Thr His His Cys Ser Glu Lys Glu Asp Glu Asp Tyr Met Pro
 50 55 60
 Ile Lys Asn Thr Asn Gln Asp Ile Tyr Arg Glu Met Gly Phe Gly His
 65 70 75 80
 Tyr Glu Glu Glu Glu Ser Cys Trp Glu Lys Gln Lys Ser Glu Lys Arg
 85 90 95
 Asp Arg Thr Gln Asn Arg Ser Arg Ser Arg Ser Arg Glu Arg Asp Gly
 100 105 110
 His Tyr Ser Asn Ser His Lys Ser Lys Tyr Gln Thr Asp Leu Tyr Glu
 115 120 125
 Arg Glu Arg Ser
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<210> 45
 <211> 214
 <212> PRT
 <213> Homo Sapiens

<400> 45
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 Lys Ile Arg Lys Glu Met Arg Val Val Asp Arg Gln Ile Arg Asp Ile
 20 25 30
 Gln Arg Glu Glu Glu Lys Val Lys Arg Ser Val Lys Asp Ala Ala Lys
 35 40 45
 Lys Gly Gln Lys Asp Val Cys Ile Val Leu Ala Lys Glu Met Ile Arg
 50 55 60
 Ser Arg Lys Ala Val Ser Lys Leu Ala Ser Lys Ala His Met Asn Ser
 65 70 75 80
 Val Leu Met Gly Met Lys Asn Gln Leu Ala Val Leu Arg Val Ala Gly
 85 90 95
 Ser Leu Gln Lys Ser Thr Glu Val Met Lys Ala Met Gln Ser Leu Val
 100 105 110
 Lys Ile Pro Glu Ile Gln Ala Thr Met Arg Glu Leu Ser Lys Glu Met
 115 120 125
 Met Lys Ala Gly Ile Ile Glu Glu Met Leu Glu Asp Thr Phe Glu Ser
 130 135 140
 Met Asp Asp Gln Glu Glu Met Glu Glu Glu Ala Glu Met Glu Ile Asp
 145 150 155 160
 Arg Ile Leu Phe Glu Ile Thr Ala Gly Ala Leu Gly Lys Ala Pro Ser
 165 170 175
 Lys Val Thr Asp Ala Leu Pro Glu Pro Glu Pro Pro Gly Ala Met Ala
 180 185 190
 Ala Ser Glu Asp Glu Glu Glu Glu Glu Glu Leu Glu Ala Met Gln Ser
 195 200 205
 Arg Leu Ala Thr Arg Ser
 210

<210> 46
 <211> 248
 <212> PRT
 <213> Homo Sapiens

<400> 46

Gly Ser Arg Glu Glu Thr Leu Ala Phe Val Pro Leu Leu Arg Leu Leu
 1 5 10 15
 Glu Ala Thr Leu Ser Pro Gly Arg Ala Phe Cys Ser Pro Ile Ser Ser
 20 25 30
 Lys Ile Gln Pro Ala Gln Val Ala Gly His Glu Leu Cys Ser Gly Ser
 35 40 45
 Trp Asn Leu Thr Leu Val Ala Ser Gly Pro Val Ser Met Ala Ala Glu
 50 55 60
 His Leu Leu Pro Gly Pro Pro Ser Leu Ala Asp Phe Leu Glu Ala
 65 70 75 80
 Gly Gly Lys Gly Thr Glu Arg Gly Ser Gly Ser Ser Lys Pro Thr Gly
 85 90 95
 Ser Ser Gly Gly Pro Arg Met Ala Ser Phe Pro Lys Thr Lys Phe Asn
 100 105 110
 Glu Tyr Lys Asp Val Leu Pro Cys Met Thr Ser Ser Arg Gly Gly Lys
 115 120 125
 Ile Lys Ala Thr Asp Phe Met Val Ala Met Arg Cys Leu Gly Ala Ser
 130 135 140
 Pro Thr Pro Gly Glu Val Gln Arg His Leu Gln Thr His Gly Ile Asp
 145 150 155 160
 Gly Asn Gly Glu Leu Asp Phe Ser Thr Phe Leu Thr Ile Met His Met
 165 170 175
 Gln Ile Lys Gln Glu Asp Pro Lys Lys Glu Ile Leu Leu Ala Met Leu
 180 185 190
 Met Val Asp Lys Glu Lys Lys Gly Tyr Val Met Ala Ser Asp Leu Arg
 195 200 205
 Ser Lys Leu Thr Ser Gly Glu Lys Leu Thr His Lys Glu Val Asp Asp
 210 215 220
 Leu Phe Arg Glu Ala Asp Ile Glu Pro Asn Gly Lys Val Lys Tyr Asp
 225 230 235 240
 Glu Phe Ile His Lys Ile Thr Leu
 245

<210> 47

<211> 177

<212> PRT

<213> Homo Sapiens

<400> 47

Leu Cys Cys Met His Tyr Cys Cys Lys Ser Cys Trp Asn Glu Tyr Leu
 1 5 10 15
 Thr Thr Arg Ile Glu Gln Asn Leu Val Leu Asn Cys Thr Cys Pro Ile
 20 25 30
 Ala Asp Cys Pro Ala Gln Pro Thr Gly Ala Phe Ile Arg Ala Ile Val
 35 40 45
 Ser Ser Pro Glu Val Ile Ser Lys Tyr Lys Ala Leu Leu Arg Gly Tyr
 50 55 60
 Val Glu Ser Cys Ser Asn Leu Thr Trp Cys Thr Asn Pro Gln Gly Cys
 65 70 75 80
 Asp Arg Ile Leu Cys Arg Gln Gly Leu Gly Cys Gly Thr Thr Cys Ser
 85 90 95
 Lys Cys Gly Trp Ala Ser Cys Phe Asn Cys Ser Phe Pro Glu Ala His
 100 105 110
 Tyr Pro Ala Ser Cys Gly His Met Ser Gln Trp Val Asp Asp Gly Gly

```

          115          120          125
Tyr Tyr Asp Gly Met Ser Val Glu Ala Lys His Leu Ala Lys Leu Ile
    130          135          140
Ser Lys Arg Cys Pro Ser Cys Gln Ala Pro Ile Glu Asn Glu Gly Cys
145          150          155          160
Leu His Met Thr Cys Ala Lys Cys Asn His Gly Phe Cys Trp Arg Cys
    165          170          175
Leu

```

<210> 48
 <211> 102
 <212> PRT
 <213> Homo Sapiens

```

    <400> 48
Glu Lys Gly Leu His Ile Asp Gln Leu Val Cys Leu Val Leu Glu Ala
  1          5          10          15
Gln Lys Gly Pro Asn Pro Pro Gly Thr Leu Gly His Thr Val Ala Gly
    20          25          30
Gly Val Ala Cys Thr Thr Thr Val Leu Ser Cys Leu His Leu Leu Ser
    35          40          45
Gln Gly Tyr Lys Arg Asp Arg Pro Gln Ile Leu Met Tyr Ala Ala Pro
    50          55          60
Pro Met Gly Pro Cys Arg Gly Ala His Phe Cys Gly Ser Ser Gln Thr
65          70          75          80
Ser Pro Pro Lys Pro Val Ala Thr Leu Ser Leu Leu Pro Cys Pro Leu
    85          90          95
Pro Pro Leu Lys Asn Gly
    100

```

<210> 49
 <211> 179
 <212> PRT
 <213> Homo Sapiens

```

    <400> 49
His Lys Pro Cys Asn Pro Arg Glu Lys Glu Arg Ile Gln Asn Ala Gly
  1          5          10          15
Gly Ser Val Met Ile Gln Arg Val Asn Gly Ser Leu Ala Val Ser Arg
    20          25          30
Ala Leu Gly Asp Tyr Asp Tyr Lys Cys Val Asp Gly Lys Gly Pro Thr
    35          40          45
Glu Gln Leu Val Ser Pro Glu Pro Glu Val Tyr Glu Ile Leu Arg Ala
    50          55          60
Glu Glu Asp Glu Phe Ile Ile Leu Ala Cys Asp Gly Ile Trp Asp Val
65          70          75          80
Met Ser Asn Glu Glu Leu Cys Glu Tyr Val Lys Ser Arg Leu Glu Val
    85          90          95
Ser Asp Asp Leu Glu Asn Val Cys Asn Trp Val Val Asp Thr Cys Leu
    100          105          110
His Lys Gly Ser Arg Asp Asn Met Ser Ile Val Leu Val Cys Phe Ser
    115          120          125
Asn Ala Pro Lys Val Ser Asp Glu Ala Val Lys Lys Asp Ser Glu Leu
    130          135          140

```

Asp Lys His Leu Glu Ser Ile Met Glu Asn Leu Ala Lys Glu Cys Leu
 145 150 155 160
 Ile Leu Pro Met Ser Cys Ala Ser Cys Leu Gln Lys Ile Ser Gln Ile
 165 170 175
 Cys Leu Leu

<210> 50
 <211> 163
 <212> PRT
 <213> Homo Sapiens

<400> 50
 Asp Leu Pro Thr Leu Glu Asp His Gln Lys Gln Ser Gln Gln Leu Lys
 1 5 10 15
 Asp Ser Glu Leu Lys Ser Thr Glu Leu Gln Glu Lys Val Thr Glu Leu
 20 25 30
 Glu Ser Leu Leu Glu Glu Thr Gln Ala Ile Cys Arg Glu Lys Glu Ile
 35 40 45
 Gln Leu Glu Ser Leu Arg Gln Arg Glu Ala Glu Phe Ser Ser Ala Gly
 50 55 60
 His Ser Leu Gln Asp Lys Gln Ser Val Glu Glu Thr Ser Gly Glu Gly
 65 70 75 80
 Pro Glu Val Glu Met Glu Ser Trp Gln Lys Arg Tyr Asp Ser Leu Gln
 85 90 95
 Lys Ile Val Glu Lys Gln Gln Gln Lys Met Asp Gln Leu Arg Ser Gln
 100 105 110
 Val Gln Ser Leu Glu Gln Glu Val Ala Glu Glu Gly Thr Ser Gln Ala
 115 120 125
 Leu Arg Glu Glu Ala Gln Arg Arg Asp Ser Ala Leu Gln Gln Leu Arg
 130 135 140
 Thr Ala Val Lys Leu Ser Val Asn Gln Asp Leu Ile Glu Lys Asn Leu
 145 150 155 160
 Thr Leu Gln

<210> 51
 <211> 164
 <212> PRT
 <213> Homo Sapiens

<400> 51
 Phe Gly Asp Ser Val Asp Cys Ser Asp Cys Trp Leu Pro Val Val Lys
 1 5 10 15
 Phe Ile Glu Glu Gln Phe Glu Gln Tyr Leu Arg Asp Glu Ser Gly Leu
 20 25 30
 Asn Arg Lys Asn Ile Gln Asp Ser Arg Val His Cys Cys Leu Tyr Phe
 35 40 45
 Ile Ser Pro Phe Gly Arg Gly Leu Arg Pro Leu Ala Phe Leu Arg Ala
 50 55 60
 Val His Lys Val Asn Ile Ile Pro Val Ile Gly Lys Ala Asp Ala Leu
 65 70 75 80
 Met Pro Gln Glu Thr Gln Ala Leu Lys Gln Lys Ile Arg Asp Gln Leu
 85 90 95
 Lys Glu Glu Glu Ile His Ile Tyr Gln Phe Pro Glu Cys Asp Ser Asp

		100						105					110				
Glu	Asp	Glu	Asp	Phe	Lys	Arg	Gln	Asp	Ala	Met	Lys	Glu	Ser	Ile	Pro		
		115						120					125				
Phe	Ala	Val	Val	Gly	Ser	Cys	Gln	Val	Val	Arg	Asp	Gly	Gly	Asn	Arg		
		130					135					140					
Pro	Val	Arg	Gly	Arg	Arg	Tyr	Ser	Trp	Gly	Asn	Val	Glu	Val	Asn	His		
		145			150					155					160		
Ile	Ala	Ile	Ser														

<210> 52
 <211> 600
 <212> PRT
 <213> Homo Sapiens

Met	Cys	Pro	Arg	Gln	Val	Asp	Arg	Ala	Lys	Glu	Lys	Gly	Ile	Gly	Thr		
1				5					10					15			
Pro	Gln	Pro	Asp	Val	Ala	Lys	Asp	Ser	Trp	Ala	Glu	Leu	Glu	Asn	Ser		
			20					25					30				
Ser	Lys	Glu	Asn	Glu	Val	Ile	Glu	Val	Lys	Ser	Met	Gly	Glu	Ser	Gln		
		35					40					45					
Ser	Lys	Lys	Leu	Gln	Gly	Gly	Tyr	Glu	Cys	Lys	Tyr	Cys	Pro	Tyr	Ser		
	50					55					60						
Thr	Gln	Asn	Leu	Asn	Glu	Phe	Thr	Glu	His	Val	Asp	Met	Gln	His	Pro		
65					70					75					80		
Asn	Val	Ile	Leu	Asn	Pro	Leu	Tyr	Val	Cys	Ala	Glu	Cys	Asn	Phe	Thr		
				85					90					95			
Thr	Lys	Lys	Tyr	Asp	Ser	Leu	Ser	Asp	His	Asn	Ser	Lys	Phe	His	Pro		
			100					105					110				
Gly	Glu	Ala	Asn	Phe	Lys	Leu	Lys	Leu	Ile	Lys	Arg	Asn	Asn	Gln	Thr		
		115					120					125					
Val	Leu	Glu	Gln	Ser	Ile	Glu	Thr	Thr	Asn	His	Val	Val	Ser	Ile	Thr		
	130					135						140					
Thr	Ser	Gly	Pro	Gly	Thr	Gly	Asp	Ser	Asp	Ser	Gly	Ile	Ser	Val	Ser		
145					150					155					160		
Lys	Thr	Pro	Ile	Met	Lys	Pro	Gly	Lys	Pro	Lys	Ala	Asp	Ala	Lys	Lys		
				165					170					175			
Val	Pro	Lys	Lys	Pro	Glu	Glu	Ile	Thr	Pro	Glu	Asn	His	Val	Glu	Gly		
		180						185					190				
Thr	Ala	Arg	Leu	Val	Thr	Asp	Thr	Ala	Glu	Ile	Leu	Ser	Arg	Leu	Gly		
		195					200					205					
Gly	Val	Glu	Leu	Leu	Gln	Asp	Thr	Leu	Gly	His	Val	Met	Pro	Ser	Val		
	210					215					220						
Gln	Leu	Pro	Pro	Asn	Ile	Asn	Leu	Val	Pro	Lys	Val	Pro	Val	Pro	Leu		
225					230					235					240		
Asn	Thr	Thr	Lys	Tyr	Asn	Ser	Ala	Leu	Asp	Thr	Asn	Ala	Thr	Met	Ile		
				245					250					255			
Asn	Ser	Phe	Asn	Lys	Phe	Pro	Tyr	Pro	Thr	Gln	Ala	Glu	Leu	Ser	Trp		
			260					265					270				
Leu	Thr	Ala	Ala	Ser	Lys	His	Pro	Glu	Glu	His	Ile	Arg	Ile	Trp	Phe		
		275					280					285					
Ala	Thr	Gln	Arg	Leu	Lys	His	Gly	Ile	Ser	Trp	Ser	Pro	Glu	Glu	Val		
	290					295					300						
Glu	Glu	Ala	Arg	Lys	Lys	Met	Phe	Asn	Gly	Thr	Ile	Gln	Ser	Val	Pro		

305
 Pro-Thr Ile Thr Val Leu Pro Ala Gln Leu Ala Pro Thr Lys Met Thr
 310 315 320
 325
 Gln Pro Ile Leu Gln Thr Ala Leu Pro Cys Gln Ile Leu Gly Gln Thr
 330 335
 340
 Ser Leu Val Leu Thr Gln Val Thr Ser Gly Ser Thr Thr Val Ser Cys
 345 350
 355
 Ser Pro Ile Thr Leu Ala Val Ala Gly Val Thr Asn His Gly Gln Lys
 360 365
 370
 375
 Arg Pro Leu Val Thr Pro Gln Ala Ala Pro Glu Pro Lys Arg Pro His
 380 385
 390
 Ile Ala Gln Val Pro Glu Pro Pro Pro Lys Val Ala Asn Pro Pro Leu
 395 400
 405
 Thr Pro Ala Ser Asp Arg Lys Lys Thr Lys Glu Gln Ile Ala His Leu
 410 415
 420
 425
 Lys Ala Ser Phe Leu Gln Ser Gln Phe Pro Asp Asp Ala Glu Val Tyr
 430 435
 440
 Arg Leu Ile Glu Val Thr Gly Leu Ala Arg Ser Glu Ile Lys Lys Trp
 445 450
 455
 Phe Ser Asp His Arg Tyr Arg Cys Gln Arg Gly Ile Val His Ile Thr
 460 465
 470
 Ser Glu Ser Leu Ala Lys Asp Gln Leu Ala Ile Ala Ala Ser Arg His
 475 480
 485
 490
 Gly Arg Thr Tyr His Ala Tyr Pro Asp Phe Ala Pro Gln Lys Phe Lys
 495 500
 505
 Glu Lys Thr Gln Gly Gln Val Lys Ile Leu Glu Asp Ser Phe Leu Lys
 510 515
 520
 Ser Ser Phe Pro Thr Gln Ala Glu Leu Asp Arg Leu Arg Val Glu Thr
 525 530
 535
 Lys Leu Ser Arg Arg Glu Ile Asp Ser Trp Phe Ser Glu Arg Arg Lys
 540 545
 550
 Leu Arg Asp Ser Met Glu Gln Ala Val Leu Asp Ser Met Gly Ser Gly
 555 560
 565
 570
 Gln Lys Arg Pro Arg Cys Gly Lys Pro Pro Met Val Leu Cys Leu Asp
 575 580
 585
 Ser Asn Ser Ser Pro Val Pro Ser
 590 595
 600

<210> 53
 <211> 163
 <212> PRT
 <213> Homo Sapiens

<400> 53
 Arg Lys Ser Trp Glu His Lys Lys Glu Glu Ile Ser Glu Ala Glu Pro Gly
 1 5 10 15
 Gly Gly Ser Leu Gly Asp Gly Arg Pro Pro Glu Glu Ser Ala His Glu
 20 25 30
 Met Met Glu Glu Glu Glu Glu Ile Pro Lys Pro Lys Ser Val Val Ala
 35 40 45
 Pro Pro Gly Ala Pro Lys Lys Glu His Val Asn His Val Ala Gly Lys
 50 55 60
 Ser Thr Ile Gly Gly Gln Ile Met Tyr Leu Thr Gly Met Val Asp Lys
 65 70 75 80
 Arg Thr Leu Glu Lys Tyr Glu Arg Glu Ala Lys Glu Lys Asn Arg Glu


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<210> 54
<211> 155
<212> PRT
<213> Homo Sapiens
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<210> 55
<211> 112
<212> PRT
<213> Homo Sapiens
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Met Gln Ala Leu Met Gln Ile Gln Gln Gly Leu Gln Thr Leu Ala Thr
 85 90 95
 Glu Ala Pro Gly Leu Ile Pro Ser Phe Thr Pro Gly Val Gly Val Gly
 100 105 110

<210> 56
 <211> 151
 <212> PRT
 <213> Homo Sapiens

<400> 56
 Lys Phe Gly Met Pro Ile Asp Cys Gly Leu Pro Pro His Ile Asp Phe
 1 5 10 15
 Gly Asp Cys Thr Lys Leu Lys Asp Asp Gln Gly Tyr Phe Glu Gln Glu
 20 25 30
 Asp Asp Met Met Glu Val Pro Tyr Val Thr Pro His Pro Pro Tyr His
 35 40 45
 Leu Gly Ala Val Ala Lys Thr Trp Glu Asn Thr Lys Glu Ser Pro Ala
 50 55 60
 Thr His Ser Ser Asn Phe Leu Tyr Gly Thr Met Val Ser Tyr Thr Cys
 65 70 75 80
 Asn Pro Gly Tyr Glu Leu Leu Gly Asn Pro Val Leu Ile Cys Gln Glu
 85 90 95
 Asp Gly Thr Trp Asn Gly Ser Ala Pro Ser Cys Ile Ser Ile Glu Cys
 100 105 110
 Asp Leu Pro Thr Ala Pro Glu Asn Gly Phe Leu Arg Phe Thr Glu Thr
 115 120 125
 Ser Met Gly Ser Ala Val Gln Tyr Ser Cys Lys Pro Gly His Ile Leu
 130 135 140
 Ala Gly Ser Asp Leu Arg Leu
 145 150

<210> 57
 <211> 220
 <212> PRT
 <213> Homo Sapiens

<400> 57
 Ala Ala Phe Val Ser Glu Val Thr Ser Phe Pro Val Val Gln Leu His
 1 5 10 15
 Met Asn Arg Thr Ala Met Arg Ala Ser Gln Lys Asp Phe Glu Asn Ser
 20 25 30
 Ile Asn Gln Val Lys Leu Leu Lys Lys Asp Pro Gly Asn Glu Val Lys
 35 40 45
 Leu Lys Leu Tyr Ala Leu Tyr Lys Gln Ala Thr Glu Gly Pro Cys Asn
 50 55 60
 Met Pro Lys Pro Gly Val Phe Asp Leu Ile Asn Lys Ala Lys Trp Asp
 65 70 75 80
 Ala Trp Asn Ala Leu Gly Ser Leu Pro Lys Glu Ala Ala Arg Gln Asn
 85 90 95
 Tyr Val Asp Leu Val Ser Ser Leu Ser Pro Ser Leu Glu Ser Ser Ser
 100 105 110
 Gln Val Glu Pro Gly Thr Asp Arg Lys Ser Thr Gly Phe Glu Thr Leu
 115 120 125
 Val Val Thr Ser Glu Asp Gly Ile Thr Lys Ile Met Phe Asn Arg Pro

```

      130              135              140
Lys Lys Lys Asn Ala Ile Asn Thr Glu Met Tyr His Glu Ile Met Arg
145              150              155              160
Ala Leu Lys Ala Ala Ser Lys Asp Asp Ser Ile Ile Thr Val Leu Thr
      165              170              175
Gly Asn Gly Asp Tyr Tyr Ser Ser Gly Asn Asp Leu Thr Asn Phe Thr
      180              185              190
Asp Ile Pro Pro Gly Gly Val Glu Lys Ala Lys Asn Asn Ala Val Leu
      195              200              205
Leu Lys Gly Ile Cys Gly Leu Phe Tyr Arg Ile Ser
      210              215              220

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<210> 58
<211> 101
<212> PRT
<213> Homo Sapiens

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```

      <400> 58
Trp Pro Asp Leu Val His Thr Trp Ser Ser Glu Glu Ala Met Gly Ser
 1              5              10              15
Cys Cys Ser Cys Pro Asp Lys Asp Thr Val Pro Asp Asn His Arg Asn
      20              25              30
Lys Phe Lys Val Ile Asn Val Asp Asp Asp Gly Asn Glu Leu Gly Ser
      35              40              45
Gly Ile Met Glu Leu Thr Asp Thr Glu Leu Ile Leu Tyr Thr Arg Lys
      50              55              60
Arg Asp Ser Val Lys Trp His Tyr Leu Cys Leu Arg Arg Tyr Gly Tyr
65              70              75              80
Asp Ser Asn Leu Phe Ser Phe Glu Ser Gly Pro Arg Cys Gln Thr Gly
      85              90              95
Thr Arg Asn Leu Cys
      100

```

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<210> 59
<211> 43
<212> PRT
<213> Homo Sapiens

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      <400> 59
Ala His Gly Pro Gly Val Glu Pro Thr Ser Arg His Gln Lys Asn Asn
 1              5              10              15
Leu Ser Ser Ser His Thr Val Arg Leu Glu Thr Arg Gly Gln Thr Glu
      20              25              30
Asn Gln Glu Cys Leu Leu Cys Pro His Glu Glu
      35              40

```

```

<210> 60
<211> 210
<212> PRT
<213> Homo Sapiens

```

```

      <400> 60
Leu Asn Gln Trp Thr Tyr Gln Ala Met Val His Glu Leu Leu Gly Ile
 1              5              10              15
Asn Asn Asn Arg Ile Asp Leu Ser Arg Val Pro Gly Ile Ser Lys Asp

```

20 25 30
 Leu Arg Glu Val Val Leu Ser Ala Glu Asn Asp Glu Phe Tyr Ala Asn
 35 40 45
 Asn Met Tyr Leu Asn Phe Ala Glu Ile Gly Ser Asn Ile Lys Asn Leu
 50 55 60
 Met Glu Asp Phe Gln Lys Lys Lys Pro Lys Glu Gln Gln Lys Leu Glu
 65 70 75 80
 Ser Ile Ala Asp Met Lys Ala Phe Val Glu Asn Tyr Pro Gln Phe Lys
 85 90 95
 Lys Met Ser Gly Thr Val Ser Lys His Val Thr Val Val Gly Glu Leu
 100 105 110
 Ser Arg Leu Val Ser Glu Arg Asn Leu Leu Glu Val Ser Glu Val Glu
 115 120 125
 Gln Glu Leu Ala Cys Gln Asn Asp His Ser Ser Ala Leu Gln Asn Ile
 130 135 140
 Lys Arg Leu Leu Gln Asn Pro Lys Val Thr Glu Phe Asp Ala Ala Arg
 145 150 155 160
 Leu Val Met Leu Tyr Ala Leu His Tyr Glu Arg His Ser Ser Asn Ser
 165 170 175
 Leu Pro Gly Leu Met Met Leu Arg Asn Lys Gly Val Ser Glu Lys Tyr
 180 185 190
 Arg Lys Leu Val Ser Ala Val Val Glu Tyr Gly Gly Lys Thr Ser Gln
 195 200 205
 Arg Lys
 210

<210> 61
 <211> 40
 <212> PRT
 <213> Homo Sapiens

<400> 61
 Thr Pro Gly Pro Gly Ala Gly Phe Tyr Ala Cys Pro Ala Arg Pro Leu
 1 5 10 15
 Val Ser Gly Ile Tyr Ser Phe Arg Trp Val Arg Gly Leu Ala Asp Gln
 20 25 30
 Glu Arg Asn Trp Gly Leu Ser Gln
 35 40

<210> 62
 <211> 238
 <212> PRT
 <213> Homo Sapiens

<400> 62
 His Glu Ala Arg Leu Lys Arg Ala Ser Ala Pro Thr Phe Asp Asn Asp
 1 5 10 15
 Tyr Ser Leu Ser Glu Leu Leu Ser Gln Leu Asp Ser Gly Val Ser Gln
 20 25 30
 Ala Val Glu Gly Pro Glu Glu Leu Ser Arg Ser Ser Ser Glu Ser Lys
 35 40 45
 Leu Pro Ser Ser Gly Ser Gly Lys Arg Leu Ser Gly Val Ser Ser Val
 50 55 60
 Asp Ser Ala Phe Ser Ser Arg Gly Ser Leu Ser Leu Ser Phe Glu Arg
 65 70 75 80

Glu Pro Ser Thr Ser Asp Leu Gly Thr Thr Asp Val Gln Lys Lys Lys
 85 90 95
 Leu Val Asp Ala Ile Val Ser Gly Asp Thr Ser Lys Leu Met Lys Ile
 100 105 110
 Leu Gln Pro Gln Asp Val Asp Leu Ala Leu Asp Ser Gly Ala Ser Leu
 115 120 125
 Leu His Leu Ala Val Glu Ala Gly Gln Glu Glu Cys Ala Lys Trp Leu
 130 135 140
 Leu Leu Asn Asn Ala Asn Pro Asn Leu Ser Asn Arg Arg Gly Ser Thr
 145 150 155 160
 Pro Leu His Met Ala Val Glu Arg Arg Val Arg Gly Val Val Glu Leu
 165 170 175
 Leu Leu Ala Arg Ile Ser Val Asn Ala Lys Asp Glu Asp Gln Trp Thr
 180 185 190
 Ala Leu His Phe Ala Asn Gly Gly Val His Thr Ala Ala Val Gly Glu
 195 200 205
 Arg Leu Gly Gln Thr Lys Val Asp Phe Glu Gly Arg Thr Pro Met Gln
 210 215 220
 Val Gly Leu Pro Thr Thr Gly Lys Asn Ile Leu Arg Ile Leu
 225 230 235

<210> 63
 <211> 146
 <212> PRT
 <213> Homo Sapiens

<400> 63
 Arg Leu Gly Ala Ala Met Met Glu Gly Leu Asp Asp Gly Pro Asp Phe
 1 5 10 15
 Leu Ser Glu Glu Asp Arg Gly Leu Lys Ala Ile Asn Val Asp Leu Gln
 20 25 30
 Ser Asp Ala Ala Leu Gln Val Asp Ile Ser Asp Ala Leu Ser Glu Arg
 35 40 45
 Asp Lys Val Lys Phe Thr Val His Thr Lys Ile Pro Pro Ala Pro Pro
 50 55 60
 Arg Pro Asp Phe Asp Ala Ser Arg Glu Lys Leu Gln Lys Leu Gly Glu
 65 70 75 80
 Gly Glu Gly Ser Met Thr Lys Glu Glu Phe Thr Lys Met Lys Gln Glu
 85 90 95
 Leu Glu Ala Glu Tyr Leu Ala Ile Phe Lys Lys Thr Val Ala Met His
 100 105 110
 Glu Val Phe Leu Cys Arg Val Ala Ala His Pro Ile Leu Arg Arg Asp
 115 120 125
 Leu Asn Phe His Val Phe Leu Glu Tyr Asn Gln Asp Leu Ser Val Arg
 130 135 140
 Gly Lys
 145

<210> 64
 <211> 63
 <212> PRT
 <213> Homo Sapiens

<400> 64
 Glu Arg Gly His Ser Ile Lys Asp Phe Val Ser Phe Ala Arg His Phe

1	5	10	15
Ser Pro Asn Pro Arg Ile Val Ser Val Asn Ala Ser Tyr Ser Leu Ser			
	20	25	30
Asn Glu Ser Ser Leu Glu Gln Val Tyr Thr Leu Lys Met Ser Phe Ile			
	35	40	45
Ala Ser Asn Thr Tyr His Asn Gln Leu Tyr Lys Glu Gly Phe Leu			
50	55	60	

<210> 65
 <211> 199
 <212> PRT
 <213> Homo Sapiens

<400> 65

Glu Ala Pro Asp Ser Ala Glu Gly Thr Thr Leu Thr Val Leu Pro Glu	
1	5
Gly Glu Glu Leu Pro Leu Cys Val Ser Glu Ser Asn Gly Leu Glu Leu	
	20
Pro Pro Ser Ala Ala Ser Asp Glu Pro Leu Gln Glu Pro Leu Glu Ala	
	35
Asp Arg Thr Ser Glu Glu Leu Thr Glu Ala Lys Thr Pro Thr Ser Ser	
50	55
Pro Glu Lys Pro Gln Glu Leu Val Thr Ala Glu Val Ala Ala Pro Ser	
65	70
Thr Ser Ser Ser Ala Thr Ser Ser Pro Glu Gly Pro Ser Pro Ala Arg	
	85
Pro Pro Arg Arg Arg Thr Ser Ala Asp Val Glu Ile Arg Gly Gln Gly	
	100
Thr Gly Arg Pro Gly Gln Pro Pro Gly Pro Lys Val Leu Arg Lys Leu	
	115
Pro Gly Arg Leu Val Thr Val Val Glu Glu Lys Glu Leu Val Arg Arg	
130	135
Arg Arg Gln Gln Arg Gly Ala Ala Ser Thr Leu Val Pro Gly Val Ser	
145	150
Glu Thr Ser Ala Ser Pro Gly Ser Pro Ser Val Arg Ser Met Ser Gly	
	165
Pro Glu Ser Ser Pro Pro Ile Gly Gly Pro Cys Glu Ala Ala Pro Ser	
	180
Ser Ser Leu Pro Thr Pro Pro	
195	

<210> 66
 <211> 1599
 <212> DNA
 <213> Homo Sapiens

<400> 66

ttctttgaaa cattattatt cagaacgaag gagaatgata cagatacact ggctgaggtg	60
ttttgaggtg cattgaaatg ttccatgctg ttacttaggt taacatgttc ttgaggtacc	120
atgccatgga ttaaaaggaa atttggtaag tggcttccac ctaaagcact tactagggaa	180
gctatgcgaa attattttaa agggtaagg gatcaaatag tacttatcct tcatgcaaaa	240
gttgtagaga agtcatatgg caatcaaaaa atttttttt gccctcccc ttgtgtatat	300
cttatgggca gtggatggaa gaaaaaaaaa gaacaaatga aatgcgatgg ttgttctgaa	360
cacagctctc atccatgtgc atttattggg ataggaaata gtgaccaaga aatgcagcag	420
ctaaacttgg aaggaaagaa ctattgcaca gccaaaacat tgtacatatc tgattcagac	480

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aagcaaaagc acttcatttt ttctgtaaag gtgttctatg gcaacgggtga tgacattggg 540
gtgttcctca gcaagtagat aaaagtcac tccaaacctt ccaaaaagaa gcagtcattg 600
aaaaatgctg acttatgcat tgtctcagga acaaagggtg ctctgtttta tcgactacga 660
tcccagacag ttagtaccag atacttgcat gtagaaggag gtaattttca tgccagttca 720
cagcagtggg gagcatttta cattcaattc ttggatgatg atggatcaga aggagaagaa 780
ttcacagtct gagatgccta cattcattat ggacaaacat gcaaacttgt gtgctcagtt 840
actggcatgg cactcccaag attgataatt atgaaagttg ataagcatac cgcattattg 900
gatgcagatg atcctgtgtc acaactccat aaatgtgcat ttaccttaa ggatacagaa 960
agaatgtatt tgtgcctttc tcaagaaaga ataattcaat ttcaggccac tccatgtcca 1020
agagaaccaa ataaagagat gataaatgat ggcgttctct ggacaatcat tagcacagat 1080
aaggcagggg atacatttta tgagggaatg ggccctgtcc ttgccccagt cactcctgtg 1140
cctgtggtag agagccttca gttgaatggc ggtggggacg tagcaatgct tgaacttaca 1200
ggacagaatt tcaactccaaa tttacgagtg tggtttgggg gggtagaagc tgaactatg 1260
tacagggtgt gagagagtat gctctgtgtc gtcccagaca tttctgcatt ccgagaaggt 1320
tggagatggg tccggcaacc agtccagggt ccagtaactt tggtcgaaa tgatggaatc 1380
atttattcca ccagccttac ctttacctac acaccagaac cagggccgcg gccacattgc 1440
agtgcagcag gagcaatcct tctagccaat tcaagccagg tgccccctaa cgaatcaaac 1500
acaaacagcg agggaagtta cacaacgcc agcacaaatt caaccagtgt cacatcatct 1560
acagccacag tggatatccta actaccgtct ttttgctag 1599

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<210> 67

<211> 729

<212> PRT

<213> Homo Sapiens

<400> 67

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Met Gly Lys Lys Tyr Lys Asn Ile Val Leu Leu Lys Gly Leu Glu Val
1 5 10 15
Ile Asn Asp Tyr His Phe Arg Met Val Lys Ser Leu Leu Ser Asn Asp
20 25 30
Leu Lys Leu Asn Leu Lys Met Arg Glu Glu Tyr Asp Lys Ile Gln Ile
35 40 45
Ala Asp Leu Met Glu Glu Lys Phe Arg Gly Asp Ala Gly Leu Gly Lys
50 55 60
Leu Ile Lys Ile Phe Glu Asp Ile Pro Thr Leu Glu Asp Leu Ala Glu
65 70 75 80
Thr Leu Lys Lys Glu Lys Leu Lys Val Lys Gly Pro Ala Leu Ser Arg
85 90 95
Lys Arg Lys Lys Glu Val His Ala Thr Ser Pro Ala Pro Ser Thr Ser
100 105 110
Ser Thr Val Lys Thr Glu Gly Ala Glu Ala Thr Pro Gly Ala Gln Lys
115 120 125
Arg Lys Lys Ser Thr Lys Glu Lys Ala Gly Pro Lys Gly Ser Lys Val
130 135 140
Ser Glu Glu Gln Thr Gln Pro Pro Ser Pro Ala Gly Ala Gly Met Ser
145 150 155 160
Thr Ala Met Gly Arg Ser Pro Ser Pro Lys Thr Ser Leu Ser Ala Pro
165 170 175
Pro Asn Ser Ser Ser Thr Glu Asn Pro Lys Thr Val Ala Lys Cys Gln
180 185 190
Val Thr Pro Arg Arg Asn Val Leu Gln Lys Arg Pro Val Ile Val Lys
195 200 205
Val Leu Ser Thr Thr Lys Pro Phe Glu Tyr Glu Thr Pro Glu Met Glu
210 215 220
Lys Lys Ile Met Phe His Ala Thr Val Ala Thr Gln Thr Gln Phe Phe

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225          230          235          240
His Val Lys Val Leu Asn Thr Ser Leu Lys Glu Lys Phe Asn Gly Lys
          245          250          255
Lys Ile Ile Ile Ile Ser Asp Tyr Leu Glu Tyr Asp Ser Leu Leu Glu
          260          265          270
Val Asn Glu Glu Ser Thr Val Ser Glu Ala Gly Pro Asn Gln Thr Phe
          275          280          285
Glu Val Pro Asn Lys Ile Ile Asn Arg Ala Lys Glu Thr Leu Lys Ile
          290          295          300
Asp Ile Leu His Lys Lys Gln Ala Ser Gly Asn Ile Val Tyr Gly Val Phe
305          310          315          320
Met Leu His Lys Lys Thr Val Asn Gln Lys Thr Thr Ile Tyr Glu Ile
          325          330          335
Gln Asp Asp Arg Gly Lys Met Asp Val Val Gly Thr Gly Gln Cys His
          340          345          350
Asn Ile Pro Cys Glu Glu Gly Asp Lys Leu Gln Leu Phe Cys Phe Arg
          355          360          365
Leu Arg Lys Lys Asn Gln Met Ser Lys Leu Ile Ser Glu Met His Ser
          370          375          380
Phe Ile Gln Ile Lys Lys Thr Asn Pro Arg Asn Asn Asp Pro Lys
385          390          395          400
Ser Met Lys Leu Pro Gln Glu Gln Arg Gln Leu Pro Tyr Pro Ser Glu
          405          410          415
Ala Ser Thr Thr Phe Pro Glu Ser His Leu Arg Thr Pro Gln Met Pro
          420          425          430
Pro Thr Thr Pro Ser Ser Ser Phe Phe Thr Lys Lys Ser Glu Asp Thr
          435          440          445
Ile Ser Lys Met Asn Asp Phe Met Arg Met Gln Ile Leu Lys Glu Gly
          450          455          460
Ser His Phe Pro Gly Pro Phe Met Thr Ser Ile Gly Pro Ala Glu Ser
465          470          475          480
His Pro His Thr Pro Gln Met Pro Pro Ser Thr Pro Ser Ser Ser Phe
          485          490          495
Leu Thr Thr Leu Lys Pro Arg Leu Lys Thr Glu Pro Glu Glu Val Ser
          500          505          510
Ile Glu Asp Ser Ala Gln Ser Asp Leu Lys Glu Val Met Val Leu Asn
          515          520          525
Ala Thr Glu Ser Phe Val Tyr Glu Pro Lys Glu Gln Lys Lys Met Phe
          530          535          540
His Ala Thr Val Ala Thr Glu Asn Glu Val Phe Arg Val Lys Val Phe
545          550          555          560
Asn Ile Asp Leu Lys Glu Lys Phe Thr Pro Lys Lys Ile Ile Ala Ile
          565          570          575
Ala Asn Tyr Val Cys Arg Asn Gly Phe Leu Glu Val Tyr Pro Phe Thr
          580          585          590
Leu Val Ala Asp Val Asn Ala Asp Ala Asn Met Glu Ile Pro Lys Gly
          595          600          605
Leu Ile Arg Ser Ala Ser Val Thr Pro Lys Ile Asn Gln Leu Cys Ser
          610          615          620
Gln Thr Lys Gly Ser Phe Val Asn Gly Val Phe Glu Val His Lys Lys
625          630          635          640
Asn Val Arg Gly Glu Phe Thr Tyr Tyr Glu Ile Gln Asp Asn Thr Gly
          645          650          655
Lys Met Glu Val Val Val His Gly Arg Leu Asn Thr Ile Asn Cys Glu
          660          665          670

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Glu Gly Asp Lys Leu Lys Leu Thr Ser Phe Glu Leu Ala Pro Lys Ser
 675 680 685
 Gly Asn Thr Gly Glu Leu Arg Ser Val Ile His Ser His Ile Lys Val
 690 695 700
 Ile Lys Thr Lys Lys Asn Lys Lys Asp Ile Leu Asn Pro Asp Ser Ser
 705 710 715 720
 Met Glu Thr Ser Pro Asp Phe Phe Phe
 725

<210> 68

<211> 754

<212> PRT

<213> Homo Sapiens

<400> 68

Met Ala Ser Val Pro Ala Leu Gln Leu Thr Pro Ala Asn Pro Pro Pro
 1 5 10 15
 Pro Glu Val Ser Asn Pro Lys Lys Pro Gly Arg Val Thr Asn Gln Leu
 20 25 30
 Gln Tyr Leu His Lys Val Val Met Lys Ala Leu Trp Lys His Gln Phe
 35 40 45
 Ala Trp Pro Phe Arg Gln Pro Val Asp Ala Val Lys Leu Gly Leu Pro
 50 55 60
 Asp Tyr His Lys Ile Ile Lys Gln Pro Met Asp Met Gly Thr Ile Lys
 65 70 75 80
 Arg Arg Leu Glu Asn Asn Tyr Tyr Trp Ala Ala Ser Glu Cys Met Gln
 85 90 95
 Asp Phe Asn Thr Met Phe Thr Asn Cys Tyr Ile Tyr Asn Lys Pro Thr
 100 105 110
 Asp Asp Ile Val Leu Met Ala Gln Thr Leu Glu Lys Ile Phe Leu Gln
 115 120 125
 Lys Val Ala Ser Met Pro Gln Glu Glu Gln Glu Leu Val Val Thr Ile
 130 135 140
 Pro Lys Asn Ser His Lys Lys Gly Ala Lys Leu Ala Ala Leu Gln Gly
 145 150 155 160
 Ser Val Thr Ser Ala His Gln Val Pro Ala Val Ser Ser Val Ser His
 165 170 175
 Thr Ala Leu Tyr Thr Pro Pro Pro Glu Ile Pro Thr Thr Val Leu Asn
 180 185 190
 Ile Pro His Pro Ser Val Ile Ser Ser Pro Leu Leu Lys Ser Leu His
 195 200 205
 Ser Ala Gly Pro Pro Leu Leu Ala Val Thr Ala Ala Pro Pro Ala Gln
 210 215 220
 Pro Leu Ala Lys Lys Lys Gly Val Lys Arg Lys Ala Asp Thr Thr Thr
 225 230 235 240
 Pro Thr Pro Thr Ala Ile Leu Ala Pro Gly Ser Pro Ala Ser Pro Pro
 245 250 255
 Gly Ser Leu Glu Pro Lys Ala Ala Arg Leu Pro Pro Met Arg Arg Glu
 260 265 270
 Ser Gly Arg Pro Ile Lys Pro Pro Arg Lys Asp Leu Pro Asp Ser Gln
 275 280 285
 Gln Gln His Gln Ser Ser Lys Lys Gly Lys Leu Ser Glu Gln Leu Lys
 290 295 300
 His Cys Asn Gly Ile Leu Lys Glu Leu Leu Ser Lys Lys His Ala Ala
 305 310 315 320

Tyr Ala Trp Pro Phe Tyr Lys Pro Val Asp Ala Ser Ala Leu Gly Leu
 325 330 335
 His Asp Tyr His Asp Ile Ile Lys His Pro Met Asp Leu Ser Thr Val
 340 345 350
 Lys Arg Lys Met Glu Asn Arg Asp Tyr Arg Asp Ala Gln Glu Phe Ala
 355 360 365
 Ala Asp Val Arg Leu Met Phe Ser Asn Cys Tyr Lys Tyr Asn Pro Pro
 370 375 380
 Asp His Asp Val Val Ala Met Ala Arg Lys Leu Gln Asp Val Phe Glu
 385 390 395 400
 Phe Arg Tyr Ala Lys Met Pro Asp Glu Pro Leu Glu Pro Gly Pro Leu
 405 410 415
 Pro Val Ser Thr Ala Met Pro Pro Gly Leu Ala Lys Ser Ser Ser Glu
 420 425 430
 Ser Ser Ser Glu Glu Ser Ser Ser Glu Ser Ser Ser Glu Glu Glu Glu
 435 440 445
 Glu Glu Asp Glu Glu Asp Glu Glu Glu Glu Ser Glu Ser Ser Asp
 450 455 460
 Ser Glu Glu Glu Arg Ala His Arg Leu Ala Glu Leu Gln Glu Gln Leu
 465 470 475 480
 Arg Ala Val His Glu Gln Leu Ala Ala Leu Ser Gln Gly Pro Ile Ser
 485 490 495
 Lys Pro Lys Arg Lys Arg Glu Lys Lys Glu Lys Lys Lys Lys Arg Lys
 500 505 510
 Ala Glu Lys His Arg Gly Arg Ala Gly Ala Asp Glu Asp Asp Lys Gly
 515 520 525
 Pro Arg Ala Pro Arg Pro Pro Gln Pro Lys Lys Ser Lys Lys Ala Ser
 530 535 540
 Gly Ser Gly Gly Gly Ser Ala Ala Leu Gly Pro Ser Gly Phe Gly Pro
 545 550 555 560
 Ser Gly Gly Ser Gly Thr Lys Leu Pro Lys Lys Ala Thr Lys Thr Ala
 565 570 575
 Pro Pro Ala Leu Pro Thr Gly Tyr Asp Ser Glu Glu Glu Glu Glu Ser
 580 585 590
 Arg Pro Met Ser Tyr Asp Glu Lys Arg Gln Leu Ser Leu Asp Ile Asn
 595 600 605
 Lys Leu Pro Gly Glu Lys Leu Gly Arg Val Val His Ile Ile Gln Ala
 610 615 620
 Arg Glu Pro Ser Leu Arg Asp Ser Asn Pro Glu Glu Ile Glu Ile Asp
 625 630 635 640
 Phe Glu Thr Leu Lys Pro Ser Thr Leu Arg Glu Leu Glu Arg Tyr Val
 645 650 655
 Leu Ser Cys Leu Arg Lys Lys Pro Arg Lys Pro Tyr Thr Ile Lys Lys
 660 665 670
 Pro Val Gly Lys Thr Lys Glu Glu Leu Ala Leu Glu Lys Lys Arg Glu
 675 680 685
 Leu Glu Lys Arg Leu Gln Asp Val Ser Gly Gln Leu Asn Ser Thr Lys
 690 695 700
 Lys Pro Pro Lys Lys Ala Asn Glu Lys Thr Glu Ser Ser Ser Ala Gln
 705 710 715 720
 Gln Val Ala Val Ser Arg Leu Ser Ala Ser Ser Ser Ser Ser Asp Ser
 725 730 735
 Ser Ser Ser Ser Ser Ser Ser Ser Ser Asp Thr Ser Asp Ser Asp
 740 745 750
 Ser Gly

<210> 69
 <211> 210
 <212> PRT
 <213> Homo Sapiens

<400> 69
 Met Asp Asp Glu Glu Glu Thr Tyr Arg Leu Trp Lys Ile Arg Lys Thr
 1 5 10 15
 Ile Met Gln Leu Cys His Asp Arg Gly Tyr Leu Val Thr Gln Asp Glu
 20 25 30
 Leu Asp Gln Thr Leu Glu Glu Phe Lys Ala Gln Phe Gly Asp Lys Pro
 35 40 45
 Ser Glu Gly Arg Pro Arg Arg Thr Asp Leu Thr Val Leu Val Ala His
 50 55 60
 Asn Asp Asp Pro Thr Asp Gln Met Phe Val Phe Phe Pro Glu Glu Pro
 65 70 75 80
 Lys Val Gly Ile Lys Thr Ile Lys Val Tyr Cys Gln Arg Met Gln Glu
 85 90 95
 Glu Asn Ile Thr Arg Ala Leu Ile Val Val Gln Gln Gly Met Thr Pro
 100 105 110
 Ser Ala Lys Gln Ser Leu Val Asp Met Ala Pro Lys Tyr Ile Leu Glu
 115 120 125
 Gln Phe Leu Gln Gln Glu Leu Leu Ile Asn Ile Thr Glu His Glu Leu
 130 135 140
 Val Pro Glu His Val Val Met Thr Lys Glu Glu Val Thr Glu Leu Leu
 145 150 155 160
 Ala Arg Tyr Lys Leu Arg Glu Asn Gln Leu Pro Arg Ile Gln Ala Gly
 165 170 175
 Asp Pro Val Ala Arg Tyr Phe Gly Ile Lys Arg Gly Gln Val Val Lys
 180 185 190
 Ile Ile Arg Pro Ser Glu Thr Ala Gly Arg Tyr Ile Thr Tyr Arg Leu
 195 200 205
 Val Gln
 210

<210> 70
 <211> 621
 <212> PRT
 <213> Homo Sapiens

<400> 70
 Met Leu Leu Leu Pro Ser Ala Ala Glu Gly Gln Gly Thr Ala Ile Thr
 1 5 10 15
 His Ala Leu Thr Ser Ala Ser Ser Val Cys Gln Val Glu Pro Val Gly
 20 25 30
 Arg Trp Phe Glu Ala Phe Val Lys Arg Arg Asn Arg Asn Ala Ser Thr
 35 40 45
 Ser Phe Gln Glu Leu Glu Asp Lys Lys Glu Leu Ser Glu Glu Ser Glu
 50 55 60
 Asp Glu Glu Leu Gln Leu Glu Glu Phe Pro Met Leu Lys Thr Leu Asp
 65 70 75 80
 Pro Lys Asp Trp Lys Asn Gln Asp His Tyr Ala Val Leu Gly Leu Gly
 85 90 95

His Val Arg Tyr Thr Ala Thr Gln Arg Gln Ile Lys Ala Ala His Lys
 100 105 110
 Ala Met Val Leu Lys His His Pro Asp Lys Arg Lys Ala Ala Gly Glu
 115 120 125
 Pro Ile Lys Glu Gly Asp Asn Asp Tyr Phe Thr Cys Ile Thr Lys Ala
 130 135 140
 Tyr Glu Met Leu Ser Asp Pro Val Lys Arg Arg Ala Phe Asn Ser Val
 145 150 155 160
 Asp Pro Thr Phe Asp Asn Ser Val Pro Ser Lys Ser Glu Ala Lys Asp
 165 170 175
 Asn Phe Phe Gln Val Phe Ser Pro Val Phe Glu Arg Asn Ser Arg Trp
 180 185 190
 Ser Asn Lys Lys Asn Val Pro Lys Leu Gly Asp Met Asn Ser Ser Phe
 195 200 205
 Glu Asp Val Asp Ala Phe Tyr Ser Phe Trp Tyr Asn Phe Asp Ser Trp
 210 215 220
 Arg Glu Phe Ser Tyr Leu Asp Glu Glu Glu Lys Glu Lys Ala Glu Cys
 225 230 235 240
 Arg Asp Glu Arg Lys Trp Ile Glu Lys Gln Asn Arg Ala Thr Arg Ala
 245 250 255
 Gln Arg Lys Lys Glu Glu Met Asn Arg Ile Arg Thr Leu Val Asp Asn
 260 265 270
 Ala Tyr Ser Cys Asp Pro Arg Ile Lys Lys Phe Lys Glu Glu Glu Lys
 275 280 285
 Ala Lys Lys Glu Ala Glu Lys Lys Ala Lys Ala Glu Ala Arg Arg Lys
 290 295 300
 Glu Gln Glu Ala Lys Glu Lys Gln Arg Gln Ala Glu Leu Glu Ala Val
 305 310 315 320
 Arg Leu Ala Lys Glu Lys Glu Glu Glu Glu Val Arg Gln Gln Ala Leu
 325 330 335
 Leu Ala Lys Lys Glu Lys Asp Ile Gln Lys Lys Ala Ile Lys Lys Glu
 340 345 350
 Arg Gln Lys Leu Arg Asn Ser Cys Lys Ser Trp Asn His Phe Ser Asp
 355 360 365
 Asn Glu Ala Asp Arg Val Lys Met Met Glu Glu Val Glu Lys Leu Cys
 370 375 380
 Asp Arg Leu Glu Leu Ala Ser Leu Gln Gly Leu Asn Glu Ile Leu Ala
 385 390 395 400
 Ser Ser Thr Arg Glu Val Gly Lys Ala Ala Leu Glu Lys Gln Ile Glu
 405 410 415
 Glu Val Asn Glu Gln Met Arg Arg Glu Lys Glu Glu Ala Asp Ala Arg
 420 425 430
 Met Arg Gln Ala Ser Lys Asn Ala Glu Lys Ser Thr Gly Gly Ser Gly
 435 440 445
 Ser Gly Ser Lys Asn Trp Ser Glu Asp Asp Leu Gln Leu Ile Lys
 450 455 460
 Ala Val Asn Leu Phe Pro Ala Gly Thr Asn Ser Arg Trp Glu Val Ile
 465 470 475 480
 Ala Asn Tyr Met Asn Ile His Ser Ser Ser Gly Val Lys Arg Thr Ala
 485 490 495
 Lys Asp Val Ile Ser Lys Ala Lys Ser Leu Gln Lys Leu Asp Pro His
 500 505 510
 Gln Lys Asp Asp Ile Asn Lys Lys Ala Phe Asp Lys Phe Lys Lys Glu
 515 520 525
 His Gly Val Ala Ser Gln Ala Asp Ser Ala Ala Pro Ser Glu Arg Phe

530		535		540
Glu Gly Pro Cys Ile Asp Ser Thr Pro Trp Thr Thr Glu Glu Gln Lys				
545		550		555
Leu Leu Glu Gln Ala Leu Lys Thr Tyr Pro Val Asn Thr Pro Glu Arg				560
		565		570
Trp Glu Lys Ile Ala Glu Ala Val Pro Gly Arg Thr Lys Lys Asp Cys				575
		580		585
Met Arg Arg Tyr Lys Glu Leu Val Glu Met Val Lys Ala Lys Lys Ala				590
		595		600
Ala Gln Glu Gln Val Leu Asn Ala Ser Arg Ala Arg Lys				605
610		615		620

<210> 71
 <211> 267
 <212> PRT
 <213> Homo Sapiens

<400> 71	
Met Ala Ser Leu Lys Val Asp Gln Glu Val Lys Leu Lys Val Asp	
1	5
Ser Phe Arg Glu Arg Ile Thr Ser Lys Ala Glu Asp Leu Val Ala Asn	10
	15
	20
Phe Phe Pro Lys Lys Leu Leu Glu Leu Asp Ser Phe Leu Lys Glu Pro	25
	30
	35
Ile Leu Asn Ile His Asp Leu Thr Gln Ile His Ser Asp Met Asn Leu	40
	45
	50
Pro Val Pro Asp Pro Ile Leu Leu Thr Asn Ser His Asp Gly Leu Asp	55
	60
	65
Gly Pro Thr Tyr Lys Lys Arg Arg Leu Asp Glu Cys Glu Glu Ala Phe	70
	75
	80
	85
Gln Gly Thr Lys Val Phe Val Met Pro Asn Gly Met Leu Lys Ser Asn	90
	95
	100
Gln Gln Leu Val Asp Ile Ile Glu Lys Val Lys Pro Glu Ile Arg Leu	105
	110
	115
Leu Ile Glu Lys Cys Asn Thr Pro Ser Gly Lys Gly Pro His Ile Cys	120
	125
	130
Phe Asp Leu Gln Val Lys Met Trp Val Gln Leu Leu Ile Pro Arg Ile	135
	140
	145
Glu Asp Gly Asn Asn Phe Gly Val Ser Ile Gln Glu Glu Thr Val Ala	150
	155
	160
	165
Glu Leu Arg Thr Val Glu Ser Glu Ala Ala Ser Tyr Leu Asp Gln Ile	170
	175
	180
Ser Arg Tyr Tyr Ile Thr Arg Ala Lys Leu Val Ser Lys Ile Ala Lys	185
	190
	195
Tyr Pro His Val Glu Asp Tyr Arg Arg Thr Val Thr Glu Ile Asp Glu	200
	205
	210
Lys Glu Tyr Ile Ser Leu Arg Leu Ile Ile Ser Glu Leu Arg Asn Gln	215
	220
	225
Tyr Val Thr Leu His Asp Met Ile Leu Lys Asn Ile Glu Lys Ile Lys	230
	235
	240
	245
Arg Pro Arg Ser Ser Asn Ala Glu Thr Leu Tyr	250
	255
	260
	265

<210> 72
 <211> 1752

<212> PRT

<213> Homo Sapiens

<400> 72

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Arg Glu Lys Arg Arg Arg Lys Ser Val Glu Asp Arg Phe Asp Gln Gln
 1          5          10          15
Lys Asn Asp Tyr Asp Gln Leu Gln Lys Ala Arg Gln Cys Glu Lys Glu
 20          25          30
Asn Leu Gly Trp Gln Lys Leu Glu Ser Glu Lys Ala Ile Lys Glu Lys
 35          40          45
Glu Tyr Glu Ile Glu Arg Leu Arg Val Leu Leu Gln Glu Glu Gly Thr
 50          55          60
Arg Lys Arg Glu Tyr Glu Asn Glu Leu Ala Lys Val Arg Asn His Tyr
 65          70          75          80
Asn Glu Glu Met Ser Asn Leu Arg Asn Lys Tyr Glu Thr Glu Ile Asn
 85          90          95
Ile Thr Lys Thr Thr Ile Lys Glu Ile Ser Met Gln Lys Glu Asp Asp
 100          105          110
Ser Lys Asn Leu Arg Asn Gln Leu Asp Arg Leu Ser Arg Glu Asn Arg
 115          120          125
Asp Leu Lys Asp Glu Ile Val Arg Leu Asn Asp Ser Ile Leu Gln Ala
 130          135          140
Thr Glu Gln Arg Arg Arg Ala Glu Glu Asn Ala Leu Gln Gln Lys Ala
 145          150          155          160
Cys Gly Ser Glu Ile Met Gln Lys Lys Gln His Leu Glu Ile Glu Leu
 165          170          175
Lys Gln Val Met Gln Gln Arg Ser Glu Asp Asn Ala Arg His Lys Gln
 180          185          190
Ser Leu Glu Glu Ala Ala Lys Thr Ile Gln Asp Lys Asn Lys Glu Ile
 195          200          205
Glu Arg Leu Lys Ala Glu Phe Gln Glu Glu Ala Lys Arg Arg Trp Glu
 210          215          220
Tyr Glu Asn Glu Leu Ser Lys Val Arg Asn Asn Tyr Asp Glu Glu Ile
 225          230          235          240
Ile Ser Leu Lys Asn Gln Phe Glu Thr Glu Ile Asn Ile Thr Lys Thr
 245          250          255
Thr Ile His Gln Leu Thr Met Gln Lys Glu Glu Asp Thr Ser Gly Tyr
 260          265          270
Arg Ala Gln Ile Asp Asn Leu Thr Arg Glu Asn Arg Ser Leu Ser Glu
 275          280          285
Glu Ile Lys Arg Leu Lys Asn Thr Leu Thr Gln Thr Thr Glu Asn Leu
 290          295          300
Arg Arg Val Glu Glu Asp Ile Gln Gln Gln Lys Ala Thr Gly Ser Glu
 305          310          315          320
Val Ser Gln Arg Lys Gln Gln Leu Glu Val Glu Leu Arg Gln Val Thr
 325          330          335
Gln Met Arg Thr Glu Glu Ser Val Arg Tyr Lys Gln Ser Leu Asp Asp
 340          345          350
Ala Ala Lys Thr Ile Gln Asp Lys Asn Lys Glu Ile Glu Arg Leu Lys
 355          360          365
Gln Leu Ile Asp Lys Glu Thr Asn Asp Arg Lys Cys Leu Glu Asp Glu
 370          375          380
Asn Ala Arg Leu Gln Arg Val Gln Tyr Asp Leu Gln Lys Ala Asn Ser
 385          390          395          400
Ser Ala Thr Glu Thr Ile Asn Lys Leu Lys Val Gln Glu Gln Glu Leu

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Phe Asp Gly Leu Arg Lys Lys Val Thr Ala Met Gln Leu Tyr Glu Cys
 850 855 860
 Gln Leu Ile Asp Lys Thr Thr Leu Asp Lys Leu Leu Lys Gly Lys Lys
 865 870 875 880
 Ser Val Glu Glu Val Ala Ser Glu Ile Gln Pro Phe Leu Arg Gly Ala
 885 890 895
 Gly Ser Ile Ala Gly Ala Ser Ala Ser Pro Lys Glu Lys Tyr Ser Leu
 900 905 910
 Val Glu Ala Lys Arg Lys Lys Leu Ile Ser Pro Glu Ser Thr Val Met
 915 920 925
 Leu Leu Glu Ala Gln Ala Ala Thr Gly Gly Ile Ile Asp Pro His Arg
 930 935 940
 Asn Glu Lys Leu Thr Val Asp Ser Ala Ile Ala Arg Asp Leu Ile Asp
 945 950 955 960
 Phe Asp Asp Arg Gln Gln Ile Tyr Ala Ala Glu Lys Ala Ile Thr Gly
 965 970 975
 Phe Asp Asp Pro Phe Ser Gly Lys Thr Val Ser Val Ser Glu Ala Ile
 980 985 990
 Lys Lys Asn Leu Ile Asp Arg Glu Thr Gly Met Arg Leu Leu Glu Ala
 995 1000 1005
 Gln Ile Ala Ser Gly Gly Val Val Asp Pro Val Asn Ser Val Phe Leu
 1010 1015 1020
 Pro Lys Asp Val Ala Leu Ala Arg Gly Leu Ile Asp Arg Asp Leu Tyr
 1025 1030 1035 104
 Arg Ser Leu Asn Asp Pro Arg Asp Ser Gln Lys Asn Phe Val Asp Pro
 1045 1050 1055
 Val Thr Lys Lys Lys Val Ser Tyr Val Gln Leu Lys Glu Arg Cys Arg
 1060 1065 1070
 Ile Glu Pro His Thr Gly Leu Leu Leu Leu Ser Val Gln Lys Arg Ser
 1075 1080 1085
 Met Ser Phe Gln Gly Ile Arg Gln Pro Val Thr Val Thr Glu Leu Val
 1090 1095 1100
 Asp Ser Gly Ile Leu Arg Pro Ser Thr Val Asn Glu Leu Glu Ser Gly
 1105 1110 1115 112
 Gln Ile Ser Tyr Asp Glu Val Gly Glu Arg Ile Lys Asp Phe Leu Gln
 1125 1130 1135
 Gly Ser Ser Cys Ile Ala Gly Ile Tyr Asn Glu Thr Thr Lys Gln Lys
 1140 1145 1150
 Leu Gly Ile Tyr Glu Ala Met Lys Ile Gly Leu Val Arg Pro Gly Thr
 1155 1160 1165
 Ala Leu Glu Leu Leu Glu Ala Gln Ala Ala Thr Gly Phe Ile Val Asp
 1170 1175 1180
 Pro Val Ser Asn Leu Arg Leu Pro Val Glu Glu Ala Tyr Lys Arg Gly
 1185 1190 1195 120
 Leu Val Gly Ile Glu Phe Lys Glu Lys Leu Leu Ser Ala Glu Arg Ala
 1205 1210 1215
 Val Thr Gly Tyr Asn Asp Pro Glu Thr Gly Asn Ile Ile Ser Leu Phe
 1220 1225 1230
 Gln Ala Met Asn Lys Glu Leu Ile Glu Lys Gly His Gly Ile Arg Leu
 1235 1240 1245
 Leu Glu Ala Gln Ile Ala Thr Gly Gly Ile Ile Asp Pro Lys Glu Ser
 1250 1255 1260
 His Arg Leu Pro Val Asp Ile Ala Tyr Lys Arg Gly Tyr Phe Asn Glu
 1265 1270 1275 128
 Glu Leu Ser Glu Ile Leu Ser Asp Pro Ser Asp Asp Thr Lys Gly Phe

	1285		1290		1295
Phe Asp Pro Asn Thr Glu Glu Asn Leu Thr Tyr Leu Gln Leu Lys Glu					
	1300		1305		1310
Arg Cys Ile Lys Asp Glu Glu Thr Gly Leu Cys Leu Leu Pro Leu Lys					
	1315		1320		1325
Glu Lys Lys Lys Gln Val Gln Thr Ser Gln Lys Asn Thr Leu Arg Lys					
	1330		1335		1340
Arg Arg Val Val Ile Val Asp Pro Glu Thr Asn Lys Glu Met Ser Val					
	1345		1350		1355
Gln Glu Ala Tyr Lys Lys Gly Leu Ile Asp Tyr Glu Thr Phe Lys Glu					
	1365		1370		1375
Leu Cys Glu Gln Glu Cys Glu Trp Glu Glu Ile Thr Ile Thr Gly Ser					
	1380		1385		1390
Asp Gly Ser Thr Arg Val Val Leu Val Asp Arg Lys Thr Gly Ser Gln					
	1395		1400		1405
Tyr Asp Ile Gln Asp Ala Ile Asp Lys Gly Leu Val Asp Arg Lys Phe					
	1410		1415		1420
Phe Asp Gln Tyr Arg Ser Gly Ser Leu Ser Leu Thr Gln Phe Ala Asp					
	1425		1430		1435
Met Ile Ser Leu Lys Asn Gly Val Gly Thr Ser Ser Ser Met Gly Ser					
	1445		1450		1455
Gly Val Ser Asp Asp Val Phe Ser Ser Ser Arg His Glu Ser Val Ser					
	1460		1465		1470
Lys Ile Ser Thr Ile Ser Ser Val Arg Asn Leu Thr Ile Arg Ser Ser					
	1475		1480		1485
Ser Phe Ser Asp Thr Leu Glu Glu Ser Ser Pro Ile Ala Ala Ile Phe					
	1490		1495		1500
Asp Thr Glu Asn Leu Glu Lys Ile Ser Ile Thr Glu Gly Ile Glu Arg					
	1505		1510		1515
Gly Ile Val Asp Ser Ile Thr Gly Gln Arg Leu Leu Glu Ala Gln Ala					
	1525		1530		1535
Cys Thr Gly Gly Ile Ile His Pro Thr Thr Gly Gln Lys Leu Ser Leu					
	1540		1545		1550
Gln Asp Ala Val Ser Gln Gly Val Ile Asp Gln Asp Met Ala Thr Ser					
	1555		1560		1565
Val Lys Pro Ala Gln Lys Ala Phe Ile Gly Phe Glu Gly Val Lys Gly					
	1570		1575		1580
Lys Lys Lys Met Ser Ala Ala Glu Ala Val Lys Glu Lys Trp Leu Pro					
	1585		1590		1595
Tyr Glu Ala Gly Gln Arg Phe Leu Glu Phe Gln Tyr Leu Thr Gly Gly					
	1605		1610		1615
Leu Val Asp Pro Glu Val His Gly Arg Ile Ser Thr Glu Glu Ala Ile					
	1620		1625		1630
Arg Lys Gly Phe Ile Asp Gly Arg Ala Ala Gln Arg Leu Gln Asp Thr					
	1635		1640		1645
Ser Ser Tyr Ala Lys Ile Leu Thr Cys Pro Lys Thr Lys Leu Lys Ile					
	1650		1655		1660
Ser Tyr Lys Asp Ala Ile Asn Arg Ser Met Val Glu Asp Ile Thr Gly					
	1665		1670		1675
Leu Arg Leu Leu Glu Ala Ala Ser Val Ser Ser Lys Gly Leu Pro Ser					
	1685		1690		1695
Pro Tyr Asn Met Ser Ser Ala Pro Gly Ser Arg Ser Gly Ser Arg Ser					
	1700		1705		1710
Gly Ser Arg Ser Gly Ser Arg Ser Gly Ser Arg Ser Gly Ser Arg Arg					
	1715		1720		1725

Gly Ser Phe Asp Ala Thr Gly Asn Ser Ser Tyr Ser Tyr Ser Tyr Ser
 1730 1735 1740
 Phe Ser Ser Ser Ser Ile Gly His
 1745 1750

<210> 73
 <211> 1978
 <212> PRT
 <213> Homo Sapiens

<400> 73
 Met Ser Arg Pro Arg Phe Asn Pro Arg Gly Asp Phe Pro Leu Gln Arg
 1 5 10 15
 Pro Arg Ala Pro Asn Pro Ser Gly Met Arg Pro Pro Gly Pro Phe Met
 20 25 30
 Arg Pro Gly Ser Met Gly Leu Pro Arg Phe Tyr Pro Ala Gly Arg Ala
 35 40 45
 Arg Gly Ile Pro His Arg Phe Ala Gly Leu Glu Ser Tyr Gln Asn Met
 50 55 60
 Gly Pro Gln Arg Met Asn Val Gln Val Thr Gln His Arg Thr Asp Pro
 65 70 75 80
 Arg Leu Thr Lys Glu Lys Leu Asp Phe His Glu Ala Gln Gln Lys Lys
 85 90 95
 Gly Lys Pro His Gly Ser Arg Trp Asp Asp Glu Pro His Ile Ser Ala
 100 105 110
 Ser Val Ala Val Lys Gln Ser Ser Val Thr Gln Val Thr Glu Gln Ser
 115 120 125
 Pro Lys Val Gln Ser Arg Tyr Thr Lys Glu Ser Ala Ser Ser Ile Leu
 130 135 140
 Ala Ser Phe Gly Leu Ser Asn Glu Asp Leu Glu Glu Leu Ser Arg Tyr
 145 150 155 160
 Pro Asp Glu Gln Leu Thr Pro Glu Asn Met Pro Leu Ile Leu Arg Asp
 165 170 175
 Ile Arg Met Arg Lys Met Gly Arg Arg Leu Pro Asn Leu Pro Ser Gln
 180 185 190
 Ser Arg Asn Lys Glu Thr Leu Gly Ser Glu Ala Val Ser Ser Asn Val
 195 200 205
 Ile Asp Tyr Gly His Ala Ser Lys Tyr Gly Tyr Thr Glu Asp Pro Leu
 210 215 220
 Glu Val Arg Ile Tyr Asp Pro Glu Ile Pro Thr Asp Glu Val Glu Asn
 225 230 235 240
 Glu Phe Gln Ser Gln Asn Ile Ser Ala Ser Val Pro Asn Pro Asn
 245 250 255
 Val Ile Cys Asn Ser Met Phe Pro Val Glu Asp Val Phe Arg Gln Met
 260 265 270
 Asp Phe Pro Gly Glu Ser Ser Asn Asn Arg Ser Phe Phe Ser Val Glu
 275 280 285
 Ser Gly Thr Lys Met Ser Gly Leu His Ile Ser Gly Gly Gln Ser Val
 290 295 300
 Leu Glu Pro Ile Lys Ser Val Asn Gln Ser Ile Asn Gln Thr Val Ser
 305 310 315 320
 Gln Thr Met Ser Gln Ser Leu Ile Pro Pro Ser Met Asn Gln Gln Pro
 325 330 335
 Phe Ser Ser Glu Leu Ile Ser Ser Val Ser Gln Gln Glu Arg Ile Pro
 340 345 350

His Glu Pro Val Ile Asn Ser Ser Asn Val His Val Gly Ser Arg Gly
 355 360 365
 Ser Lys Lys Asn Tyr Gln Ser Gln Ala Asp Ile Pro Ile Arg Ser Pro
 370 375 380
 Phe Gly Ile Val Lys Ala Ser Trp Leu Pro Lys Phe Ser His Ala Asp
 385 390 395 400
 Ala Gln Lys Met Lys Arg Leu Pro Thr Pro Ser Met Met Asn Asp Tyr
 405 410 415
 Tyr Ala Ala Ser Pro Arg Ile Phe Pro His Leu Cys Ser Leu Cys Asn
 420 425 430
 Val Glu Cys Ser His Leu Lys Asp Trp Ile Gln His Gln Asn Thr Ser
 435 440 445
 Thr His Ile Glu Ser Cys Arg Gln Leu Arg Gln Gln Tyr Pro Asp Trp
 450 455 460
 Asn Pro Glu Ile Leu Pro Ser Arg Arg Asn Glu Gly Asn Arg Lys Glu
 465 470 475 480
 Asn Glu Thr Pro Arg Arg Arg Ser His Ser Pro Ser Pro Arg Arg Ser
 485 490 495
 Arg Arg Ser Ser Ser Ser His Arg Phe Arg Arg Ser Arg Ser Pro Met
 500 505 510
 His Tyr Met Tyr Arg Pro Arg Ser Arg Ser Pro Arg Ile Cys His Arg
 515 520 525
 Phe Ile Ser Arg Tyr Arg Ser Arg Ser Arg Ser Arg Ser Pro Tyr Arg
 530 535 540
 Ile Arg Asn Pro Phe Arg Gly Ser Pro Lys Cys Phe Arg Ser Val Ser
 545 550 555 560
 Pro Glu Arg Met Ser Arg Arg Ser Val Arg Ser Ser Asp Arg Lys Lys
 565 570 575
 Ala Leu Glu Asp Val Val Gln Arg Ser Gly His Gly Thr Glu Phe Asn
 580 585 590
 Lys Gln Lys His Leu Glu Ala Ala Asp Lys Gly His Ser Pro Ala Gln
 595 600 605
 Lys Pro Lys Thr Ser Ser Gly Thr Lys Pro Ser Val Lys Pro Thr Ser
 610 615 620
 Ala Thr Lys Ser Asp Ser Asn Leu Gly Gly His Ser Ile Arg Cys Lys
 625 630 635 640
 Ser Lys Asn Leu Glu Asp Asp Thr Leu Ser Glu Cys Lys Gln Val Ser
 645 650 655
 Asp Lys Ala Val Ser Leu Gln Arg Lys Leu Arg Lys Glu Gln Ser Leu
 660 665 670
 His Tyr Gly Ser Val Leu Leu Ile Thr Glu Leu Pro Glu Asp Gly Cys
 675 680 685
 Thr Glu Glu Asp Val Arg Lys Leu Phe Gln Pro Phe Gly Lys Val Asn
 690 695 700
 Asp Val Leu Ile Val Pro Tyr Arg Lys Glu Ala Tyr Leu Glu Met Glu
 705 710 715 720
 Phe Lys Glu Ala Ile Thr Ala Ile Met Lys Tyr Ile Glu Thr Thr Pro
 725 730 735
 Leu Thr Ile Lys Gly Lys Ser Val Lys Ile Cys Val Pro Gly Lys Lys
 740 745 750
 Lys Ala Gln Asn Lys Glu Val Lys Lys Lys Thr Leu Glu Ser Lys Lys
 755 760 765
 Val Ser Ala Ser Thr Leu Lys Arg Asp Ala Asp Ala Ser Lys Ala Val
 770 775 780
 Glu Ile Val Thr Ser Thr Ser Ala Ala Lys Thr Gly Gln Ala Lys Ala

785					790						795					800
Cys	Val	Ala	Lys	Val	Asn	Lys	Ser	Thr	Gly	Lys	Ser	Ala	Ser	Ser	Ser	Val
				805						810					815	
Lys	Ser	Val	Val	Thr	Val	Ala	Val	Lys	Gly	Asn	Lys	Ala	Ser	Ile	Lys	
			820					825					830			
Thr	Ala	Lys	Ser	Gly	Gly	Lys	Lys	Ser	Leu	Glu	Ala	Lys	Lys	Thr	Gly	
		835					840					845				
Asn	Val	Lys	Asn	Lys	Asp	Ser	Asn	Lys	Pro	Val	Thr	Ile	Pro	Glu	Asn	
	850					855					860					
Ser	Glu	Ile	Lys	Thr	Ser	Ile	Glu	Val	Lys	Ala	Thr	Glu	Asn	Cys	Ala	
865					870					875					880	
Lys	Glu	Ala	Ile	Ser	Asp	Ala	Ala	Leu	Glu	Ala	Thr	Glu	Asn	Glu	Pro	
			885						890					895		
Leu	Asn	Lys	Glu	Thr	Glu	Glu	Met	Cys	Val	Met	Leu	Val	Ser	Asn	Leu	
		900						905					910			
Pro	Asn	Lys	Gly	Tyr	Ser	Val	Glu	Glu	Val	Tyr	Asp	Leu	Ala	Lys	Pro	
	915						920					925				
Phe	Gly	Gly	Leu	Lys	Asp	Ile	Leu	Ile	Leu	Ser	Ser	His	Lys	Lys	Ala	
930						935					940					
Tyr	Ile	Glu	Ile	Asn	Arg	Lys	Ala	Ala	Glu	Ser	Met	Val	Lys	Phe	Tyr	
945					950					955					960	
Thr	Cys	Phe	Pro	Val	Leu	Met	Asp	Gly	Asn	Gln	Leu	Ser	Ile	Ser	Met	
				965					970						975	
Ala	Pro	Glu	Asn	Met	Asn	Ile	Lys	Asp	Glu	Glu	Ala	Ile	Phe	Ile	Thr	
			980					985					990			
Leu	Val	Lys	Glu	Asn	Asp	Pro	Glu	Ala	Asn	Ile	Asp	Thr	Ile	Tyr	Asp	
	995						1000					1005				
Arg	Phe	Val	His	Leu	Asp	Asn	Leu	Pro	Glu	Asp	Gly	Leu	Gln	Cys	Val	
1010						1015					1020					
Leu	Cys	Val	Gly	Leu	Gln	Phe	Gly	Lys	Val	Asp	His	His	Val	Phe	Ile	
1025					1030					1035				104		
Ser	Asn	Arg	Asn	Lys	Ala	Ile	Leu	Gln	Leu	Asp	Ser	Pro	Glu	Ser	Ala	
				1045					1050				1055			
Gln	Ser	Met	Tyr	Ser	Phe	Leu	Lys	Gln	Asn	Pro	Gln	Asn	Ile	Gly	Asp	
		1060						1065				1070				
His	Met	Leu	Thr	Cys	Ser	Leu	Ser	Pro	Lys	Ile	Asp	Leu	Pro	Glu	Val	
	1075						1080					1085				
Gln	Ile	Glu	His	Asp	Pro	Glu	Leu	Glu	Lys	Glu	Ser	Pro	Gly	Leu	Lys	
	1090					1095					1100					
Asn	Ser	Pro	Ile	Asp	Glu	Ser	Glu	Val	Gln	Thr	Ala	Thr	Asp	Ser	Pro	
1105					1110					1115					112	
Ser	Val	Lys	Pro	Asn	Glu	Leu	Glu	Glu	Glu	Ser	Thr	Pro	Ser	Ile	Gln	
				1125					1130					1135		
Thr	Glu	Thr	Leu	Val	Gln	Gln	Glu	Glu	Pro	Cys	Glu	Glu	Glu	Ala	Glu	
			1140					1145					1150			
Lys	Ala	Thr	Cys	Asp	Ser	Asp	Phe	Ala	Val	Glu	Thr	Leu	Glu	Leu	Glu	
		1155					1160					1165				
Thr	Gln	Gly	Glu	Glu	Val	Lys	Glu	Glu	Ile	Pro	Leu	Val	Ala	Ser	Ala	
	1170					1175					1180					
Ser	Val	Ser	Ile	Glu	Gln	Phe	Thr	Glu	Asn	Ala	Glu	Glu	Cys	Ala	Leu	
1185					1190					1195				120		
Asn	Gln	Gln	Met	Phe	Asn	Ser	Asp	Leu	Glu	Lys	Lys	Gly	Ala	Glu	Ile	
				1205					1210				1215			
Ile	Asn	Pro	Lys	Thr	Ala	Leu	Leu	Pro	Ser	Asp	Ser	Val	Phe	Ala	Glu	
			1220					1225					1230			

Glu Arg Asn Leu Lys Gly Ile Leu Glu Glu Ser Pro Ser Glu Ala Glu
 1235 1240 1245
 Asp Phe Ile Ser Gly Ile Thr Gln Thr Met Val Glu Ala Val Ala Glu
 1250 1255 1260
 Val Glu Lys Asn Glu Thr Val Ser Glu Ile Leu Pro Ser Thr Cys Ile
 1265 1270 1275 128
 Val Thr Leu Val Pro Gly Ile Pro Thr Gly Asp Glu Lys Thr Val Asp
 1285 1290 1295
 Lys Lys Asn Ile Ser Glu Lys Lys Gly Asn Met Asp Glu Lys Glu Glu
 1300 1305 1310
 Lys Glu Phe Asn Thr Lys Glu Thr Arg Met Asp Leu Gln Ile Gly Thr
 1315 1320 1325
 Glu Lys Ala Glu Lys Asn Glu Gly Arg Met Asp Ala Glu Lys Val Glu
 1330 1335 1340
 Lys Met Ala Ala Met Lys Glu Lys Pro Ala Glu Asn Thr Leu Phe Lys
 1345 1350 1355 136
 Ala Tyr Pro Asn Lys Gly Val Gly Gln Ala Asn Lys Pro Asp Glu Thr
 1365 1370 1375
 Ser Lys Thr Ser Ile Leu Ala Val Ser Asp Val Ser Ser Ser Lys Pro
 1380 1385 1390
 Ser Ile Lys Ala Val Ile Val Ser Ser Pro Lys Ala Lys Ala Thr Val
 1395 1400 1405
 Ser Lys Thr Glu Asn Gln Lys Ser Phe Pro Lys Ser Val Pro Arg Asp
 1410 1415 1420
 Gln Ile Asn Ala Glu Lys Lys Leu Ser Ala Lys Glu Phe Gly Leu Leu
 1425 1430 1435 144
 Lys Pro Thr Ser Ala Arg Ser Gly Leu Ala Glu Ser Ser Ser Lys Phe
 1445 1450 1455
 Lys Pro Thr Gln Ser Ser Leu Thr Arg Gly Gly Ser Gly Arg Ile Ser
 1460 1465 1470
 Ala Leu Gln Gly Lys Leu Ser Lys Leu Asp Tyr Arg Asp Ile Thr Lys
 1475 1480 1485
 Gln Ser Gln Glu Thr Glu Ala Arg Pro Ser Ile Met Lys Arg Asp Asp
 1490 1495 1500
 Ser Asn Asn Lys Thr Leu Ala Glu Gln Asn Thr Lys Asn Pro Lys Ser
 1505 1510 1515 152
 Thr Thr Gly Arg Ser Ser Lys Ser Lys Glu Pro Leu Phe Pro Phe
 1525 1530 1535
 Asn Leu Asp Glu Phe Val Thr Val Asp Glu Val Ile Glu Glu Val Asn
 1540 1545 1550
 Pro Ser Gln Ala Lys Gln Asn Pro Leu Lys Gly Lys Arg Lys Glu Thr
 1555 1560 1565
 Leu Lys Asn Val Pro Phe Ser Glu Leu Asn Leu Lys Lys Lys Gly
 1570 1575 1580
 Lys Thr Ser Thr Pro Arg Gly Val Glu Gly Glu Leu Ser Phe Val Thr
 1585 1590 1595 160
 Leu Asp Glu Ile Gly Glu Glu Glu Asp Ala Ala Ala His Leu Ala Gln
 1605 1610 1615
 Ala Leu Val Thr Val Asp Glu Val Ile Asp Glu Glu Glu Leu Asn Met
 1620 1625 1630
 Glu Glu Met Val Lys Asn Ser Asn Ser Leu Phe Thr Leu Asp Glu Leu
 1635 1640 1645
 Ile Asp Gln Asp Asp Cys Ile Ser His Ser Glu Pro Lys Asp Val Thr
 1650 1655 1660
 Val Leu Ser Val Ala Glu Glu Gln Asp Leu Leu Lys Gln Glu Arg Leu

1665 1670 1675 168
 Val Thr Val Asp Glu Ile Gly Glu Val Glu Glu Leu Pro Leu Asn Glu
 1685 1690 1695
 Ser Ala Asp Ile Thr Phe Ala Thr Leu Asn Thr Lys Gly Asn Glu Gly
 1700 1705 1710
 Asp Ile Val Arg Asp Ser Ile Gly Phe Ile Ser Ser Gln Val Pro Glu
 1715 1720 1725
 Asp Pro Ser Thr Leu Val Thr Val Asp Glu Ile Gln Asp Asp Ser Ser
 1730 1735 1740
 Asp Leu His Leu Val Thr Leu Asp Glu Val Thr Glu Glu Asp Glu Asp
 1745 1750 1755 176
 Ser Leu Ala Asp Phe Asn Asn Leu Lys Glu Glu Leu Asn Phe Val Thr
 1765 1770 1775
 Val Asp Glu Val Gly Glu Glu Glu Asp Gly Asp Asn Asp Leu Lys Val
 1780 1785 1790
 Glu Leu Ala Gln Ser Lys Asn Asp His Pro Thr Asp Lys Lys Gly Asn
 1795 1800 1805
 Arg Lys Lys Arg Ala Val Asp Thr Lys Lys Thr Lys Leu Glu Ser Leu
 1810 1815 1820
 Ser Gln Val Gly Pro Val Asn Glu Asn Val Met Glu Glu Asp Leu Lys
 1825 1830 1835 184
 Thr Met Ile Glu Arg His Leu Thr Ala Lys Thr Pro Thr Lys Arg Val
 1845 1850 1855
 Arg Ile Gly Lys Thr Leu Pro Ser Glu Lys Ala Val Val Thr Glu Pro
 1860 1865 1870
 Ala Lys Gly Glu Glu Ala Phe Gln Met Ser Glu Val Asp Glu Glu Ser
 1875 1880 1885
 Gly Leu Lys Asp Ser Glu Pro Glu Arg Lys Arg Lys Lys Thr Glu Asp
 1890 1895 1900
 Ser Ser Ser Gly Lys Ser Val Ala Ser Asp Val Pro Glu Glu Leu Asp
 1905 1910 1915 192
 Phe Leu Val Pro Lys Ala Gly Phe Phe Cys Pro Ile Cys Ser Leu Phe
 1925 1930 1935
 Tyr Ser Gly Glu Lys Ala Met Thr Asn His Cys Lys Ser Thr Arg His
 1940 1945 1950
 Lys Gln Asn Thr Glu Lys Phe Met Ala Lys Gln Arg Lys Glu Lys Glu
 1955 1960 1965
 Gln Asn Glu Ala Glu Glu Arg Ser Ser Arg
 1970 1975

<210> 74

<211> 366

<212> PRT

<213> Homo Sapiens

<400> 74

Met Arg Val Met Ala Pro Arg Thr Leu Ile Leu Leu Leu Ser Gly Ala
 1 5 10 15
 Leu Ala Leu Thr Glu Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe
 20 25 30
 Tyr Thr Ala Val Ser Arg Pro Gly Arg Gly Glu Pro His Phe Ile Ala
 35 40 45
 Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala
 50 55 60
 Ala Ser Pro Arg Gly Glu Pro Arg Ala Pro Trp Val Glu Gln Glu Gly

65					70					75					80
Pro	Glu	Tyr	Trp	Asp	Arg	Glu	Thr	Gln	Lys	Tyr	Lys	Arg	Gln	Ala	Gln
				85					90					95	
Thr	Asp	Arg	Val	Ser	Leu	Arg	Asn	Leu	Arg	Gly	Tyr	Tyr	Asn	Gln	Ser
			100					105					110		
Glu	Ala	Gly	Ser	His	Ile	Ile	Gln	Arg	Met	Tyr	Gly	Cys	Asp	Val	Gly
		115					120					125			
Pro	Asp	Gly	Arg	Leu	Leu	Arg	Gly	Tyr	Asp	Gln	Tyr	Ala	Tyr	Asp	Gly
	130					135					140				
Lys	Asp	Tyr	Ile	Ala	Leu	Asn	Glu	Asp	Leu	Arg	Ser	Trp	Thr	Ala	Ala
145					150					155					160
Asp	Thr	Ala	Ala	Gln	Ile	Thr	Gln	Arg	Lys	Trp	Glu	Ala	Ala	Arg	Glu
				165					170					175	
Ala	Glu	Gln	Leu	Arg	Ala	Tyr	Leu	Glu	Gly	Leu	Cys	Val	Glu	Trp	Leu
		180						185					190		
Arg	Arg	Tyr	Leu	Lys	Asn	Gly	Lys	Glu	Thr	Leu	Gln	Arg	Ala	Glu	His
	195					200						205			
Pro	Lys	Thr	His	Val	Thr	His	His	Pro	Val	Ser	Asp	His	Glu	Ala	Thr
	210					215					220				
Leu	Arg	Cys	Trp	Ala	Leu	Gly	Phe	Tyr	Pro	Ala	Glu	Ile	Thr	Leu	Thr
225					230					235					240
Trp	Gln	Trp	Asp	Gly	Glu	Asp	Gln	Thr	Gln	Asp	Thr	Glu	Leu	Val	Glu
			245						250					255	
Thr	Arg	Pro	Ala	Gly	Asp	Gly	Thr	Phe	Gln	Lys	Trp	Ala	Ala	Val	Val
			260					265						270	
Val	Pro	Ser	Gly	Glu	Glu	Gln	Arg	Tyr	Thr	Cys	His	Val	Gln	His	Glu
	275						280					285			
Gly	Leu	Pro	Glu	Pro	Leu	Thr	Leu	Arg	Trp	Glu	Pro	Ser	Ser	Gln	Pro
	290					295				300					
Thr	Ile	Pro	Ile	Val	Gly	Ile	Val	Ala	Gly	Leu	Ala	Val	Leu	Ala	Val
305					310					315					320
Leu	Ala	Val	Leu	Gly	Ala	Val	Val	Ala	Val	Val	Met	Cys	Arg	Arg	Lys
			325					330						335	
Ser	Ser	Gly	Gly	Lys	Gly	Gly	Ser	Cys	Ser	Gln	Ala	Ala	Ser	Ser	Asn
		340					345						350		
Ser	Ala	Gln	Gly	Ser	Asp	Glu	Ser	Leu	Ile	Ala	Cys	Lys	Ala		
	355						360					365			

<210> 75

<211> 240

<212> PRT

<213> Homo Sapiens

<400> 75

Met	Gly	Leu	Glu	Leu	Tyr	Leu	Asp	Leu	Leu	Ser	Gln	Pro	Cys	Arg	Ala
1				5				10					15		
Val	Tyr	Ile	Phe	Ala	Lys	Lys	Asn	Asp	Ile	Pro	Phe	Glu	Leu	Arg	Ile
		20						25				30			
Val	Asp	Leu	Ile	Lys	Gly	Gln	His	Leu	Ser	Asp	Ala	Phe	Ala	Gln	Val
	35					40					45				
Asn	Pro	Leu	Lys	Lys	Val	Pro	Ala	Leu	Lys	Asp	Gly	Asp	Phe	Thr	Leu
	50					55				60					
Thr	Glu	Ser	Val	Ala	Ile	Leu	Leu	Tyr	Leu	Thr	Arg	Lys	Tyr	Lys	Val
65					70					75					80
Pro	Asp	Tyr	Trp	Tyr	Pro	Gln	Asp	Leu	Gln	Ala	Arg	Ala	Arg	Val	Asp

				85					90					95			
Glu	Tyr	Leu	Ala	Trp	Gln	His	Thr	Thr	Leu	Arg	Arg	Ser	Cys	Leu	Arg		
			100						105				110				
Ala	Leu	Trp	His	Lys	Val	Met	Phe	Pro	Val	Phe	Leu	Gly	Gly	Pro	Val		
		115						120				125					
Ser	Pro	Gln	Thr	Leu	Ala	Ala	Thr	Leu	Ala	Glu	Leu	Asp	Val	Thr	Leu		
		130					135					140					
Gln	Leu	Leu	Glu	Asp	Lys	Phe	Leu	Gln	Asn	Lys	Ala	Phe	Leu	Thr	Gly		
145					150					155					160		
Pro	His	Ile	Ser	Leu	Ala	Asp	Leu	Val	Ala	Ile	Thr	Glu	Leu	Met	His		
			165						170					175			
Pro	Val	Gly	Ala	Gly	Cys	Gln	Val	Phe	Glu	Gly	Arg	Pro	Lys	Leu	Ala		
		180						185					190				
Thr	Trp	Arg	Gln	Arg	Val	Glu	Ala	Ala	Val	Gly	Glu	Asp	Leu	Phe	Gln		
		195					200					205					
Glu	Ala	His	Glu	Val	Ile	Leu	Lys	Ala	Lys	Asp	Phe	Pro	Pro	Ala	Asp		
	210					215					220						
Pro	Thr	Ile	Lys	Gln	Lys	Leu	Met	Pro	Trp	Val	Leu	Ala	Met	Ile	Arg		
225					230					235					240		

<210> 76

<211> 953

<212> PRT

<213> Homo Sapiens

<400> 76

Met	Ile	Thr	Ser	Ala	Ala	Gly	Ile	Ile	Ser	Leu	Leu	Asp	Glu	Asp	Glu		
1				5					10					15			
Pro	Gln	Leu	Lys	Glu	Phe	Ala	Leu	His	Lys	Leu	Asn	Ala	Val	Val	Asn		
			20					25					30				
Asp	Phe	Trp	Ala	Glu	Ile	Ser	Glu	Ser	Val	Asp	Lys	Ile	Glu	Val	Leu		
	35						40					45					
Tyr	Glu	Asp	Glu	Gly	Phe	Arg	Ser	Arg	Gln	Phe	Ala	Ala	Leu	Val	Ala		
	50					55					60						
Ser	Lys	Val	Phe	Tyr	His	Leu	Gly	Ala	Phe	Glu	Glu	Ser	Leu	Asn	Tyr		
65				70					75					80			
Ala	Leu	Gly	Ala	Arg	Asp	Leu	Phe	Asn	Val	Asn	Asp	Asn	Ser	Glu	Tyr		
			85					90					95				
Val	Glu	Thr	Ile	Ile	Ala	Lys	Cys	Ile	Asp	His	Tyr	Thr	Lys	Gln	Cys		
		100						105					110				
Val	Glu	Asn	Ala	Asp	Leu	Pro	Glu	Gly	Glu	Lys	Lys	Pro	Ile	Asp	Gln		
	115						120					125					
Arg	Leu	Glu	Gly	Ile	Val	Asn	Lys	Met	Phe	Gln	Arg	Cys	Leu	Asp	Asp		
	130					135					140						
His	Lys	Tyr	Lys	Gln	Ala	Ile	Gly	Ile	Ala	Leu	Glu	Thr	Arg	Arg	Leu		
145				150						155					160		
Asp	Val	Phe	Glu	Lys	Thr	Ile	Leu	Glu	Ser	Asn	Asp	Val	Pro	Gly	Met		
			165					170					175				
Leu	Ala	Tyr	Ser	Leu	Lys	Leu	Cys	Met	Ser	Leu	Met	Gln	Asn	Lys	Gln		
		180						185					190				
Phe	Arg	Asn	Lys	Val	Leu	Arg	Val	Leu	Val	Lys	Ile	Tyr	Met	Asn	Leu		
	195						200					205					
Glu	Lys	Pro	Asp	Phe	Ile	Asn	Val	Cys	Gln	Cys	Leu	Ile	Phe	Leu	Asp		
	210					215					220						
Asp	Pro	Gln	Ala	Val	Ser	Asp	Ile	Leu	Glu	Lys	Leu	Val	Lys	Glu	Asp		

225					230					235					240
Asn	Leu	Leu	Met	Ala	Tyr	Gln	Ile	Cys	Phe	Asp	Leu	Tyr	Glu	Ser	Ala
				245						250					255
Ser	Gln	Gln	Phe	Leu	Ser	Ser	Val	Ile	Gln	Asn	Leu	Arg	Thr	Val	Gly
			260					265						270	
Thr	Pro	Ile	Ala	Ser	Val	Pro	Gly	Ser	Thr	Asn	Thr	Gly	Thr	Val	Pro
		275					280					285			
Gly	Ser	Glu	Lys	Asp	Ser	Asp	Ser	Met	Glu	Thr	Glu	Glu	Lys	Thr	Ser
	290					295					300				
Ser	Ala	Phe	Val	Gly	Lys	Thr	Pro	Glu	Ala	Ser	Pro	Glu	Pro	Lys	Asp
305					310					315					320
Gln	Thr	Leu	Lys	Met	Ile	Lys	Ile	Leu	Ser	Gly	Glu	Met	Ala	Ile	Glu
				325					330					335	
Leu	His	Leu	Gln	Phe	Leu	Ile	Arg	Asn	Asn	Asn	Thr	Asp	Leu	Met	Ile
			340					345					350		
Leu	Lys	Asn	Thr	Lys	Asp	Ala	Val	Arg	Asn	Ser	Val	Cys	His	Thr	Ala
	355					360						365			
Thr	Val	Ile	Ala	Asn	Ser	Phe	Met	His	Cys	Gly	Thr	Thr	Ser	Asp	Gln
	370					375						380			
Phe	Leu	Arg	Asp	Asn	Leu	Glu	Trp	Leu	Ala	Arg	Ala	Thr	Asn	Trp	Ala
385					390					395					400
Lys	Phe	Thr	Ala	Thr	Ala	Ser	Leu	Gly	Val	Ile	His	Lys	Gly	His	Glu
				405					410					415	
Lys	Glu	Ala	Leu	Gln	Leu	Met	Ala	Thr	Tyr	Leu	Pro	Lys	Asp	Thr	Ser
			420					425					430		
Pro	Gly	Ser	Ala	Tyr	Gln	Glu	Gly	Gly	Gly	Leu	Tyr	Ala	Leu	Gly	Leu
	435						440					445			
Ile	His	Ala	Asn	His	Gly	Gly	Asp	Ile	Ile	Asp	Tyr	Leu	Leu	Asn	Gln
	450					455					460				
Leu	Lys	Asn	Ala	Ser	Asn	Asp	Ile	Val	Arg	His	Gly	Gly	Ser	Leu	Gly
465					470					475					480
Leu	Gly	Leu	Ala	Ala	Met	Gly	Thr	Ala	Arg	Gln	Asp	Val	Tyr	Asp	Leu
				485					490					495	
Leu	Lys	Thr	Asn	Leu	Tyr	Gln	Asp	Asp	Ala	Val	Thr	Gly	Glu	Ala	Ala
			500					505					510		
Gly	Leu	Ala	Leu	Gly	Leu	Val	Met	Leu	Gly	Ser	Lys	Asn	Ala	Gln	Ala
	515						520					525			
Ile	Glu	Asp	Met	Val	Gly	Tyr	Ala	Gln	Glu	Thr	Gln	His	Glu	Lys	Ile
	530					535					540				
Leu	Arg	Gly	Leu	Ala	Val	Gly	Ile	Ala	Leu	Val	Met	Tyr	Gly	Arg	Met
545					550					555					560
Glu	Glu	Ala	Asp	Ala	Leu	Ile	Glu	Ser	Leu	Cys	Arg	Asp	Lys	Asp	Pro
				565					570					575	
Ile	Leu	Arg	Arg	Ser	Gly	Met	Tyr	Thr	Val	Ala	Met	Ala	Tyr	Cys	Gly
			580					585					590		
Ser	Gly	Asn	Asn	Lys	Ala	Ile	Arg	Arg	Leu	Leu	His	Val	Ala	Val	Ser
		595					600					605			
Asp	Val	Asn	Asp	Asp	Val	Arg	Ser	Ala	Ala	Val	Glu	Ser	Leu	Gly	Phe
	610					615					620				
Ile	Leu	Phe	Arg	Thr	Pro	Glu	Gln	Cys	Pro	Ser	Val	Val	Ser	Leu	Leu
625					630					635					640
Ser	Glu	Ser	Tyr	Asn	Pro	His	Val	Arg	Tyr	Gly	Ala	Ala	Met	Ala	Leu
				645					650				655		
Gly	Ile	Cys	Cys	Ala	Gly	Thr	Gly	Asn	Lys	Glu	Ala	Ile	Asn	Leu	Leu
			660					665					670		

Glu Pro Met Thr Asn Asp Pro Val Asn Tyr Val Arg Gln Gly Ala Leu
 675 680 685
 Ile Ala Ser Ala Leu Ile Met Ile Gln Gln Thr Glu Ile Thr Cys Pro
 690 695 700
 Lys Val Asn Gln Phe Arg Gln Leu Tyr Ser Lys Val Ile Asn Asp Lys
 705 710 715 720
 His Asp Asp Val Met Ala Lys Phe Gly Ala Ile Leu Ala Gln Gly Ile
 725 730 735
 Leu Asp Ala Gly Gly His Asn Val Thr Ile Ser Leu Gln Ser Arg Thr
 740 745 750
 Gly His Thr His Met Pro Ser Val Val Gly Val Leu Val Phe Thr Gln
 755 760 765
 Phe Trp Phe Trp Phe Pro Leu Ser His Phe Leu Ser Leu Ala Tyr Thr
 770 775 780
 Pro Thr Cys Val Ile Gly Leu Asn Lys Asp Leu Lys Met Pro Lys Val
 785 790 795 800
 Gln Tyr Lys Ser Asn Cys Lys Pro Ser Thr Phe Ala Tyr Pro Ala Pro
 805 810 815
 Leu Glu Val Pro Lys Glu Lys Glu Lys Glu Lys Val Ser Thr Ala Val
 820 825 830
 Leu Ser Ile Thr Ala Lys Ala Lys Lys Glu Lys Glu Lys Glu Lys
 835 840 845
 Lys Glu Glu Glu Lys Met Glu Val Asp Glu Ala Glu Lys Lys Glu Glu
 850 855 860
 Lys Glu Lys Lys Lys Glu Pro Glu Pro Asn Phe Gln Leu Leu Asp Asn
 865 870 875 880
 Pro Ala Arg Val Met Pro Ala Gln Leu Lys Val Leu Thr Met Pro Glu
 885 890 895
 Thr Cys Arg Tyr Gln Pro Phe Lys Pro Leu Ser Ile Gly Gly Ile Ile
 900 905 910
 Ile Leu Lys Asp Thr Ser Glu Asp Ile Glu Glu Leu Val Glu Pro Val
 915 920 925
 Ala Ala His Gly Pro Lys Ile Glu Glu Glu Glu Gln Glu Pro Glu Pro
 930 935 940
 Pro Glu Pro Phe Glu Tyr Ile Asp Asp
 945 950

<210> 77

<211> 335

<212> PRT

<213> Homo Sapiens

<400> 77

Met Gly Lys Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg
 1 5 10 15
 Leu Val Thr Arg Ala Ala Phe Asn Ser Gly Lys Val Asp Ile Val Ala
 20 25 30
 Ile Asn Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln
 35 40 45
 Tyr Asp Ser Thr His Gly Lys Phe His Gly Thr Val Lys Ala Glu Asn
 50 55 60
 Gly Lys Leu Val Ile Asn Gly Asn Pro Ile Thr Ile Phe Gln Glu Arg
 65 70 75 80
 Asp Pro Ser Lys Ile Lys Trp Gly Asp Ala Gly Ala Glu Tyr Val Val
 85 90 95

Glu Ser Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu
 100 105 110
 Gln Gly Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala
 115 120 125
 Pro Met Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu
 130 135 140
 Lys Ile Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu
 145 150 155 160
 Ala Lys Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr
 165 170 175
 Thr Val His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser
 180 185 190
 Gly Lys Leu Trp Arg Asp Gly Arg Gly Ala Leu Gln Asn Ile Ile Pro
 195 200 205
 Ala Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu
 210 215 220
 Asn Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Ala Asn Val
 225 230 235 240
 Ser Val Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp
 245 250 255
 Asp Ile Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly
 260 265 270
 Ile Leu Gly Tyr Thr Glu His Gln Val Val Ser Ser Asp Phe Asn Ser
 275 280 285
 Asp Thr His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn
 290 295 300
 Asp His Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Phe Gly Tyr
 305 310 315 320
 Ser Asn Arg Val Val Asp Leu Met Ala His Met Ala Ser Lys Glu
 325 330 335

<210> 78
 <211> 117
 <212> PRT
 <213> Homo Sapiens

<400> 78
 Met Val Gln Arg Leu Thr Tyr Arg Arg Arg Leu Ser Tyr Asn Thr Ala
 1 5 10 15
 Ser Asn Lys Thr Arg Leu Ser Arg Thr Pro Gly Asn Arg Ile Val Tyr
 20 25 30
 Leu Tyr Thr Lys Lys Val Gly Lys Ala Pro Lys Ser Ala Cys Gly Val
 35 40 45
 Cys Pro Gly Lys Leu Arg Gly Val Arg Pro Val Arg Pro Lys Val Leu
 50 55 60
 Met Arg Leu Ser Lys Thr Lys Lys His Val Ser Arg Ala Tyr Gly Gly
 65 70 75 80
 Ser Met Cys Ala Lys Cys Val Arg Asp Arg Ile Lys Arg Ala Phe Leu
 85 90 95
 Ile Glu Glu Gln Lys Ile Ile Val Lys Val Leu Lys Ala Gln Ala Gln
 100 105 110
 Ser Gln Lys Ala Lys
 115

<210> 79

<211> 614

<212> PRT

<213> Homo Sapiens

<400> 79

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Arg Ser Gly Gln Pro Arg Ala Glu Gly Leu Gly Ala Gly Ala Ala Gly
 1      5      10      15
Pro Leu Arg Ala Met Ala Ala Pro Val Lys Gly Asn Arg Lys Gln Ser
 20      25      30
Thr Glu Gly Asp Ala Leu Asp Pro Pro Ala Ser Pro Lys Pro Ala Gly
 35      40      45
Lys Gln Asn Gly Ile Gln Asn Pro Ile Ser Leu Glu Asp Ser Pro Glu
 50      55      60
Ala Gly Gly Glu Arg Glu Glu Glu Gln Glu Arg Glu Glu Glu Gln Ala
 65      70      75      80
Phe Leu Val Ser Leu Tyr Lys Phe Met Lys Glu Arg His Thr Pro Ile
 85      90      95
Glu Arg Val Pro His Leu Gly Phe Lys Gln Ile Asn Leu Trp Lys Ile
 100     105     110
Tyr Lys Ala Val Glu Lys Leu Gly Ala Tyr Glu Leu Val Thr Gly Arg
 115     120     125
Arg Leu Trp Lys Asn Val Tyr Asp Glu Leu Gly Gly Ser Pro Gly Ser
 130     135     140
Thr Ser Ala Ala Thr Cys Thr Arg Arg His Tyr Glu Arg Leu Val Leu
 145     150     155     160
Pro Tyr Val Arg His Leu Lys Gly Glu Asp Asp Lys Pro Leu Pro Thr
 165     170     175
Ser Lys Pro Arg Lys Gln Tyr Lys Met Ala Lys Glu Asn Arg Gly Asp
 180     185     190
Asp Gly Ala Thr Glu Arg Pro Lys Lys Ala Lys Glu Glu Arg Arg Met
 195     200     205
Asp Gln Met Met Pro Gly Lys Thr Lys Ala Asp Ala Ala Asp Pro Ala
 210     215     220
Pro Leu Pro Ser Gln Glu Pro Pro Arg Asn Ser Thr Glu Gln Gln Gly
 225     230     235     240
Leu Ala Ser Gly Ser Ser Val Ser Phe Val Gly Ala Ser Gly Cys Pro
 245     250     255
Glu Ala Tyr Lys Arg Leu Leu Ser Ser Phe Tyr Cys Lys Gly Thr His
 260     265     270
Gly Ile Met Ser Pro Leu Ala Lys Lys Lys Leu Leu Ala Gln Val Ser
 275     280     285
Lys Val Glu Ala Leu Gln Cys Gln Glu Glu Gly Cys Arg His Gly Ala
 290     295     300
Glu Pro Gln Ala Ser Pro Ala Val His Leu Pro Glu Ser Pro Gln Ser
 305     310     315     320
Pro Lys Gly Leu Thr Glu Asn Ser Arg His Arg Leu Thr Pro Gln Glu
 325     330     335
Gly Leu Gln Ala Pro Gly Gly Ser Leu Arg Glu Glu Ala Gln Ala Gly
 340     345     350
Pro Cys Pro Ala Ala Pro Ile Phe Lys Gly Cys Phe Tyr Thr His Pro
 355     360     365
Thr Glu Val Leu Lys Pro Val Ser Gln His Pro Arg Asp Phe Phe Ser
 370     375     380
Arg Leu Lys Asp Gly Val Leu Leu Gly Pro Pro Gly Lys Glu Gly Leu
 385     390     395     400

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Ser Val Lys Glu Pro Gln Leu Val Trp Gly Gly Asp Ala Asn Arg Pro
 405 410 415
 Ser Ala Phe His Lys Gly Gly Ser Arg Lys Gly Ile Leu Tyr Pro Lys
 420 425 430
 Pro Lys Ala Cys Trp Val Ser Pro Met Ala Lys Val Pro Ala Glu Ser
 435 440 445
 Pro Thr Leu Pro Pro Thr Phe Pro Ser Ser Pro Gly Leu Gly Ser Lys
 450 455 460
 Arg Ser Leu Glu Glu Glu Gly Ala Ala His Ser Gly Lys Arg Leu Arg
 465 470 475 480
 Ala Val Ser Pro Phe Leu Lys Glu Ala Asp Ala Lys Lys Cys Gly Ala
 485 490 495
 Lys Pro Ala Gly Ser Gly Leu Val Ser Cys Leu Leu Gly Pro Ala Leu
 500 505 510
 Gly Pro Val Pro Pro Glu Ala Tyr Arg Gly Thr Met Leu His Cys Pro
 515 520 525
 Leu Asn Phe Thr Gly Thr Pro Gly Pro Leu Lys Gly Gln Ala Ala Leu
 530 535 540
 Pro Phe Ser Pro Leu Val Ile Pro Ala Phe Pro Ala His Phe Leu Ala
 545 550 555 560
 Thr Ala Gly Pro Ser Pro Met Ala Ala Gly Leu Met His Phe Pro Pro
 565 570 575
 Thr Ser Phe Asp Ser Ala Leu Arg His Arg Leu Cys Pro Ala Ser Ser
 580 585 590
 Ala Trp His Ala Pro Pro Val Thr Thr Tyr Ala Ala Pro His Phe Phe
 595 600 605
 His Leu Asn Thr Lys Leu
 610

<210> 80
 <211> 114
 <212> PRT
 <213> Homo Sapiens

<400> 80
 Met Ala Ser Val Ser Glu Leu Ala Cys Ile Tyr Ser Ala Leu Ile Leu
 1 5 10 15
 His Asp Asp Glu Val Thr Val Thr Glu Asp Lys Ile Asn Ala Leu Ile
 20 25 30
 Lys Ala Ala Gly Val Asn Val Glu Pro Phe Trp Pro Gly Leu Phe Ala
 35 40 45
 Lys Ala Leu Ala Asn Val Asn Ile Gly Ser Leu Ile Cys Asn Val Gly
 50 55 60
 Ala Gly Gly Pro Ala Pro Ala Ala Gly Ala Ala Pro Ala Gly Gly Pro
 65 70 75 80
 Ala Pro Ser Thr Ala Ala Ala Pro Ala Glu Glu Lys Lys Val Glu Ala
 85 90 95
 Lys Lys Glu Glu Ser Glu Glu Ser Asp Asp Asp Met Gly Phe Gly Leu
 100 105 110
 Phe Asp

<210> 81
 <211> 596
 <212> PRT

<213> Homo Sapiens

<400> 81

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Met Arg Arg Ala His Glu Gly Arg Glu Ile Pro Ser Leu Gly Gly Ala
 1           5           10           15
Arg Arg Arg Glu Val Leu Gln Ala Gly Arg Ser Gln Arg Ala Ala Gly
 20           25           30
Arg Arg Arg Arg Arg Gln Glu Leu Glu Leu Gly Val Gly Ser Gly Arg
 35           40           45
Pro Gly Gly Pro Pro Pro Gly Pro Gly Arg Arg Gly Thr Cys Ala Ala
 50           55           60
Ala Leu Pro Pro Glu Trp Pro Arg Arg Arg Thr Gly Leu Pro Arg Arg
 65           70           75           80
Gly Pro Arg Pro Pro Leu Ala Met Ala Lys Trp Leu Asn Lys Tyr Phe
 85           90           95
Ser Leu Gly Asn Ser Lys Thr Lys Ser Pro Pro Gln Pro Pro Arg Pro
 100          105          110
Asp Tyr Arg Glu Gln Arg Arg Arg Gly Glu Arg Pro Ser Gln Pro Pro
 115          120          125
Gln Ala Val Pro Gln Ala Ser Ser Ala Ala Ser Ala Ser Cys Gly Pro
 130          135          140
Ala Thr Ala Ser Cys Phe Ser Ala Ser Ser Gly Ser Leu Pro Asp Asp
 145          150          155          160
Ser Gly Ser Thr Ser Asp Leu Ile Arg Ala Tyr Arg Ala Gln Lys Glu
 165          170          175
Arg His Phe Gln Asp Pro Tyr Asn Gly Pro Gly Ser Ser Leu Arg Lys
 180          185          190
Leu Arg Ala Met Cys Arg Leu Asp Tyr Cys Gly Gly Ser Gly Glu Pro
 195          200          205
Gly Gly Val Gln Arg Ala Phe Ser Ala Ser Ser Ala Ser Gly Ala Ala
 210          215          220
Gly Cys Cys Cys Ala Ser Ser Gly Ala Gly Ala Ala Ala Ser Ser Ser
 225          230          235          240
Ser Ser Ser Gly Ser Pro His Leu Tyr Arg Ser Ser Ser Glu Arg Arg
 245          250          255
Pro Ala Thr Pro Ala Glu Val Arg Tyr Ile Ser Pro Lys His Arg Leu
 260          265          270
Ile Lys Val Glu Ser Ala Ala Gly Gly Gly Ala Gly Asp Pro Leu Gly
 275          280          285
Gly Ala Cys Ala Gly Gly Arg Thr Trp Ser Pro Thr Ala Cys Gly Gly
 290          295          300
Lys Lys Leu Leu Asn Lys Cys Ala Ala Ser Ala Ala Glu Glu Ser Gly
 305          310          315          320
Ala Gly Lys Lys Asp Lys Val Thr Ile Ala Asp Asp Tyr Ser Asp Pro
 325          330          335
Phe Asp Ala Lys Asn Asp Leu Lys Ser Lys Ala Gly Lys Gly Glu Ser
 340          345          350
Ala Gly Tyr Met Glu Pro Tyr Glu Ala Gln Arg Ile Met Thr Glu Phe
 355          360          365
Gln Arg Gln Glu Ser Val Arg Ser Gln His Lys Gly Ile Gln Leu Tyr
 370          375          380
Asp Thr Pro Tyr Glu Pro Glu Gly Gln Ser Val Asp Ser Asp Ser Glu
 385          390          395          400
Ser Thr Val Ser Pro Arg Leu Arg Glu Ser Lys Leu Pro Gln Asp Asp
 405          410          415

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Asp Arg Pro Ala Asp Glu Tyr Asp Gln Pro Trp Glu Trp Asn Arg Val
 420 425 430
 Thr Ser Pro Ala Leu Ala Ala Gln Phe Asn Gly Asn Glu Lys Arg Gln
 435 440 445
 Ser Ser Pro Ser Pro Ser Arg Asp Arg Arg Arg Gln Leu Arg Ala Pro
 450 455 460
 Gly Gly Gly Phe Lys Pro Ile Lys His Gly Ser Pro Glu Phe Cys Gly
 465 470 475 480
 Ile Leu Gly Glu Arg Val Asp Pro Ala Val Pro Leu Glu Lys Gln Ile
 485 490 495
 Trp Tyr His Gly Ala Ile Ser Arg Gly Asp Ala Glu Asn Leu Leu Arg
 500 505 510
 Leu Cys Lys Glu Cys Ser Tyr Leu Val Arg Asn Ser Gln Thr Ser Lys
 515 520 525
 His Asp Tyr Pro Leu Ser Leu Arg Ser Asn Gln Gly Phe Met His Met
 530 535 540
 Lys Leu Ala Lys Thr Lys Glu Lys Tyr Val Leu Gly Gln Asn Ser Pro
 545 550 555 560
 Pro Phe Asp Ser Val Pro Glu Val Ile His Tyr Tyr Thr Thr Arg Lys
 565 570 575
 Leu Pro Ile Lys Gly Ala Glu His Leu Ser Leu Leu Tyr Pro Val Ala
 580 585 590
 Val Arg Thr Leu
 595

<210> 82
 <211> 207
 <212> PRT
 <213> Homo Sapiens

<400> 82
 Met Ser Pro Leu Leu Arg Arg Leu Leu Leu Ala Ala Leu Leu Gln Leu
 1 5 10 15
 Ala Pro Ala Gln Ala Pro Val Ser Gln Pro Asp Ala Pro Gly His Gln
 20 25 30
 Arg Lys Val Val Ser Trp Ile Asp Val Tyr Thr Arg Ala Thr Cys Gln
 35 40 45
 Pro Arg Glu Val Val Val Pro Leu Thr Val Glu Leu Met Gly Thr Val
 50 55 60
 Ala Lys Gln Leu Val Pro Ser Cys Val Thr Val Gln Arg Cys Gly Gly
 65 70 75 80
 Cys Cys Pro Asp Asp Gly Leu Glu Cys Val Pro Thr Gly Gln His Gln
 85 90 95
 Val Arg Met Gln Ile Leu Met Ile Arg Tyr Pro Ser Ser Gln Leu Gly
 100 105 110
 Glu Met Ser Leu Glu Glu His Ser Gln Cys Glu Cys Arg Pro Lys Lys
 115 120 125
 Lys Asp Ser Ala Val Lys Pro Asp Arg Ala Ala Thr Pro His His Arg
 130 135 140
 Pro Gln Pro Arg Ser Val Pro Gly Trp Asp Ser Ala Pro Gly Ala Pro
 145 150 155 160
 Ser Pro Ala Asp Ile Thr His Pro Thr Pro Ala Pro Gly Pro Ser Ala
 165 170 175
 His Ala Ala Pro Ser Thr Thr Ser Ala Leu Thr Pro Gly Pro Ala Ala
 180 185 190

Ala Ala Ala Asp Ala Ala Ala Ser Ser Val Ala Lys Gly Gly Ala
 195 200 205

<210> 83
 <211> 429
 <212> PRT
 <213> Homo Sapiens

<400> 83
 Glu Cys Asp Val Met Thr Tyr Val Arg Glu Thr Cys Gly Cys Cys Asp
 1 5 10 15
 Cys Glu Lys Arg Cys Gly Ala Leu Asp Val Val Phe Val Ile Asp Ser
 20 25 30
 Ser Glu Ser Ile Gly Tyr Thr Asn Phe Thr Leu Glu Lys Asn Phe Val
 35 40 45
 Ile Asn Val Val Asn Arg Leu Gly Ala Ile Ala Lys Asp Pro Lys Ser
 50 55 60
 Glu Thr Gly Thr Arg Val Gly Val Val Gln Tyr Ser His Glu Gly Thr
 65 70 75 80
 Phe Glu Ala Ile Gln Leu Asp Asp Glu His Ile Asp Ser Leu Ser Ser
 85 90 95
 Phe Lys Glu Ala Val Lys Asn Leu Glu Trp Ile Ala Gly Gly Thr Trp
 100 105 110
 Thr Pro Ser Ala Leu Lys Phe Ala Tyr Asp Arg Leu Ile Lys Glu Ser
 115 120 125
 Arg Arg Gln Lys Thr Arg Val Phe Ala Val Val Ile Thr Asp Gly Arg
 130 135 140
 His Asp Pro Arg Asp Asp Asp Leu Asn Leu Arg Ala Leu Cys Asp Arg
 145 150 155 160
 Asp Val Thr Val Thr Ala Ile Gly Ile Gly Asp Met Phe His Glu Lys
 165 170 175
 His Glu Ser Glu Asn Leu Tyr Ser Ile Ala Cys Asp Lys Pro Gln Gln
 180 185 190
 Val Arg Asn Met Thr Leu Phe Ser Asp Leu Val Ala Glu Lys Phe Ile
 195 200 205
 Asp Asp Met Glu Asp Val Leu Cys Pro Asp Pro Gln Ile Val Cys Pro
 210 215 220
 Asp Leu Pro Cys Gln Thr Glu Leu Ser Val Ala Gln Cys Thr Gln Arg
 225 230 235 240
 Pro Val Asp Ile Val Phe Leu Leu Asp Gly Ser Glu Arg Leu Gly Glu
 245 250 255
 Gln Asn Phe His Lys Ala Arg Arg Phe Val Glu Gln Val Ala Arg Arg
 260 265 270
 Leu Thr Leu Ala Arg Arg Asp Asp Asp Pro Leu Asn Ala Arg Val Ala
 275 280 285
 Leu Leu Gln Phe Gly Gly Pro Gly Glu Gln Gln Val Ala Phe Pro Leu
 290 295 300
 Ser His Asn Leu Thr Ala Ile His Glu Ala Leu Glu Thr Thr Gln Tyr
 305 310 315 320
 Leu Asn Ser Phe Ser His Val Gly Ala Gly Val Val His Ala Ile Asn
 325 330 335
 Ala Ile Val Arg Ser Pro Arg Gly Gly Ala Arg Arg His Ala Glu Leu
 340 345 350
 Ser Phe Val Phe Leu Thr Asp Gly Val Thr Gly Asn Asp Ser Leu His
 355 360 365

Glu Ser Ala His Ser Met Arg Asn Glu Asn Val Val Pro Thr Val Leu
 370 375 380
 Ala Leu Gly Ser Asp Val Asp Met Asp Val Leu Thr Thr Leu Ser Leu
 385 390 395 400
 Gly Asp Arg Ala Ala Val Phe His Glu Lys Asp Tyr Asp Ser Leu Ala
 405 410 415
 Gln Pro Gly Phe Phe Asp Arg Phe Ile Arg Trp Ile Cys
 420 425

<210> 84
 <211> 113
 <212> PRT
 <213> Homo Sapiens

<400> 84
 Met Ser Ala Ser Val Val Ser Val Ile Ser Arg Phe Leu Glu Glu Tyr
 1 5 10 15
 Leu Ser Ser Thr Pro Gln Arg Leu Lys Leu Leu Asp Ala Tyr Leu Leu
 20 25 30
 Tyr Ile Leu Leu Thr Gly Ala Leu Gln Phe Gly Tyr Cys Leu Leu Val
 35 40 45
 Gly Thr Phe Pro Phe Asn Ser Phe Leu Ser Gly Phe Ile Ser Cys Val
 50 55 60
 Gly Ser Phe Ile Leu Ala Val Cys Leu Arg Ile Gln Ile Asn Pro Gln
 65 70 75 80
 Asn Lys Ala Asp Phe Gln Gly Ile Ser Pro Glu Arg Ala Phe Ala Asp
 85 90 95
 Phe Leu Phe Ala Ser Thr Ile Leu His Leu Val Val Met Asn Phe Val
 100 105 110
 Gly

<210> 85
 <211> 258
 <212> PRT
 <213> Homo Sapiens

<400> 85
 Met Ile Asn Ile Glu Ser Met Asp Thr Asp Lys Asp Asp Pro His Gly
 1 5 10 15
 Arg Leu Glu Tyr Thr Glu His Gln Gly Arg Ile Lys Asn Ala Arg Glu
 20 25 30
 Ala His Ser Gln Ile Glu Lys Arg Arg Arg Asp Lys Met Asn Ser Phe
 35 40 45
 Ile Asp Glu Leu Ala Ser Leu Val Pro Thr Cys Asn Ala Met Ser Arg
 50 55 60
 Lys Leu Asp Lys Leu Thr Val Leu Arg Met Ala Val Gln His Met Lys
 65 70 75 80
 Thr Leu Arg Gly Ala Thr Asn Pro Tyr Thr Glu Ala Asn Tyr Lys Pro
 85 90 95
 Thr Phe Leu Ser Asp Asp Glu Leu Lys His Leu Ile Leu Arg Ala Ala
 100 105 110
 Asp Gly Phe Leu Phe Val Val Gly Cys Asp Arg Gly Lys Ile Leu Phe
 115 120 125
 Val Ser Glu Ser Val Phe Lys Ile Leu Asn Tyr Ser Gln Asn Asp Leu

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      130              135              140
Ile Gly Gln Ser Leu Phe Asp Tyr Leu His Pro Lys Asp Ile Ala Lys
145              150              155              160
Val Lys Glu Gln Leu Ser Ser Ser Asp Thr Ala Pro Arg Glu Arg Leu
      165              170              175
Ile Asp Ala Lys Thr Gly Leu Pro Val Lys Thr Asp Ile Thr Pro Gly
      180              185              190
Pro Ser Arg Leu Cys Ser Gly Ala Arg Arg Ser Phe Phe Cys Arg Met
      195              200              205
Lys Cys Asn Arg Pro Ser Val Asn Val Glu Asp Lys Asn Phe Pro Ser
      210              215              220
Thr Cys Ser Lys Lys Lys Ala Asp Arg Lys Ala Phe Cys Thr Ile His
225              230              235              240
Ser Thr Gly Tyr Phe Gly Ile Phe Thr Thr Arg Thr Ser Arg His Ile
      245              250              255
Val Leu

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<210> 86
 <211> 569
 <212> PRT
 <213> Homo Sapiens

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      <400> 86
Met Ser Thr Met Val Tyr Ile Lys Glu Asp Lys Leu Glu Lys Leu Thr
  1              5              10              15
Gln Asp Glu Ile Ile Ser Lys Thr Lys Gln Val Ile Gln Gly Leu Glu
      20              25              30
Ala Leu Lys Asn Glu His Asn Ser Ile Leu Gln Ser Leu Leu Glu Thr
      35              40              45
Leu Lys Cys Leu Lys Lys Asp Asp Glu Ser Asn Leu Val Glu Glu Lys
      50              55              60
Ser Asn Met Ile Arg Lys Ser Leu Glu Met Leu Glu Leu Gly Leu Ser
      65              70              75              80
Glu Ala Gln Val Met Met Ala Leu Ser Asn His Leu Asn Ala Val Glu
      85              90              95
Ser Glu Lys Gln Lys Leu Arg Ala Gln Val Arg Arg Leu Cys Gln Glu
      100              105              110
Asn Gln Trp Leu Arg Asp Glu Leu Ala Asn Thr Gln Gln Lys Leu Gln
      115              120              125
Lys Ser Glu Gln Ser Val Ala Gln Leu Glu Glu Glu Lys Lys His Leu
      130              135              140
Glu Phe Met Asn Gln Leu Lys Lys Tyr Asp Asp Asp Ile Ser Pro Ser
145              150              155              160
Glu Asp Lys Asp Thr Asp Ser Thr Lys Glu Pro Leu Asp Asp Leu Phe
      165              170              175
Pro Asn Asp Glu Asp Asp Pro Gly Gln Gly Ile Gln Gln Gln His Ser
      180              185              190
Ser Ala Ala Ala Ala Ala Gln Gln Gly Gly Tyr Glu Ile Pro Ala Arg
      195              200              205
Leu Arg Thr Leu His Asn Leu Val Ile Gln Tyr Ala Ser Gln Gly Arg
      210              215              220
Tyr Glu Val Ala Val Pro Leu Cys Lys Gln Ala Leu Glu Asp Leu Glu
225              230              235              240
Lys Thr Ser Gly His Asp His Pro Asp Val Ala Thr Met Leu Asn Ile

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245 250 255
 Leu Ala Leu Val Tyr Arg Asp Gln Asn Lys Tyr Lys Asp Ala Ala Asn
 260 265 270
 Leu Leu Asn Asp Ala Leu Ala Ile Arg Glu Lys Thr Leu Gly Lys Asp
 275 280 285
 His Pro Ala Val Ala Ala Thr Leu Asn Asn Leu Ala Val Leu Tyr Gly
 290 295 300
 Lys Arg Gly Lys Tyr Lys Glu Ala Glu Pro Leu Cys Lys Arg Ala Leu
 305 310 315 320
 Glu Ile Arg Glu Lys Val Leu Gly Lys Asp His Pro Asp Val Ala Lys
 325 330 335
 Gln Leu Asn Asn Leu Ala Leu Leu Cys Gln Asn Gln Gly Lys Tyr Glu
 340 345 350
 Glu Val Glu Tyr Tyr Tyr Gln Arg Ala Leu Glu Ile Tyr Gln Thr Lys
 355 360 365
 Leu Gly Pro Asp Asp Pro Asn Val Ala Lys Thr Lys Asn Asn Leu Ala
 370 375 380
 Ser Cys Tyr Leu Lys Gln Gly Lys Phe Lys Gln Ala Glu Thr Leu Tyr
 385 390 395 400
 Lys Glu Ile Leu Thr Arg Ala His Glu Arg Glu Phe Gly Ser Val Asp
 405 410 415
 Asp Glu Asn Lys Pro Ile Trp Met His Ala Glu Glu Arg Glu Glu Cys
 420 425 430
 Lys Gly Lys Gln Lys Asp Gly Thr Ser Phe Gly Glu Tyr Gly Gly Trp
 435 440 445
 Tyr Lys Ala Cys Lys Val Asp Ser Pro Thr Val Thr Thr Thr Leu Lys
 450 455 460
 Asn Leu Gly Ala Leu Tyr Arg Arg Gln Gly Lys Phe Glu Ala Ala Glu
 465 470 475 480
 Thr Leu Glu Glu Ala Ala Met Arg Ser Arg Lys Gln Gly Leu Asp Asn
 485 490 495
 Val His Lys Gln Arg Val Ala Glu Val Leu Asn Asp Pro Glu Asn Met
 500 505 510
 Glu Lys Arg Arg Ser Arg Glu Ser Leu Asn Val Asp Val Val Lys Tyr
 515 520 525
 Glu Ser Gly Pro Asp Gly Gly Glu Glu Val Ser Met Ser Val Glu Trp
 530 535 540
 Asn Gly Gly Val Ser Gly Arg Ala Ser Phe Cys Gly Lys Arg Gln Gln
 545 550 555 560
 Gln Gln Trp Pro Gly Arg Arg His Arg
 565

<210> 87

<211> 736

<212> PRT

<213> Homo Sapiens

<400> 87

Met Glu Ala Leu Ile Pro Val Ile Asn Lys Leu Gln Asp Val Phe Asn
 1 5 10 15
 Thr Val Gly Ala Asp Ile Ile Gln Leu Pro Gln Ile Val Val Val Gly
 20 25 30
 Thr Gln Ser Ser Gly Lys Ser Ser Val Leu Glu Ser Leu Val Gly Arg
 35 40 45
 Asp Leu Leu Pro Arg Gly Thr Gly Ile Val Thr Arg Arg Pro Leu Ile

50	55	60
Leu Gln Leu Val His Val Thr Gln Glu Asp Lys Arg Lys Thr Thr Gly		
65	70	75
Glu Glu Asn Gly Val Glu Ala Glu Glu Trp Gly Lys Phe Leu His Thr		80
	85	90
Lys Asn Lys Leu Tyr Thr Asp Phe Asp Glu Ile Arg Gln Glu Ile Glu		95
	100	105
Asn Glu Thr Glu Arg Ile Ser Gly Asn Asn Lys Gly Val Ser Pro Glu		110
	115	120
Pro Ile His Leu Lys Ile Phe Ser Pro Asn Val Val Asn Leu Thr Leu		125
	130	135
Val Asp Leu Pro Gly Met Thr Lys Val Pro Val Gly Asp Gln Pro Lys		140
145	150	155
Asp Ile Glu Leu Gln Ile Arg Glu Leu Ile Leu Arg Phe Ile Ser Asn		160
	165	170
Pro Asn Ser Ile Ile Leu Ala Val Thr Ala Ala Asn Thr Asp Met Ala		175
	180	185
Thr Ser Glu Ala Leu Lys Ile Ser Arg Glu Val Asp Pro Asp Gly Arg		190
	195	200
Arg Thr Leu Ala Val Ile Thr Lys Leu Asp Leu Met Asp Ala Gly Thr		205
	210	215
Asp Ala Met Asp Val Leu Met Gly Arg Val Ile Pro Val Lys Leu Gly		220
225	230	235
Ile Ile Gly Val Val Asn Arg Ser Gln Leu Asp Ile Asn Asn Lys Lys		240
	245	250
Ser Val Thr Asp Ser Ile Arg Asp Glu Tyr Ala Phe Leu Gln Lys Lys		255
	260	265
Tyr Pro Ser Leu Ala Asn Arg Asn Gly Thr Lys Tyr Leu Ala Arg Thr		270
	275	280
Leu Asn Arg Leu Leu Met His His Ile Arg Asp Cys Leu Pro Glu Leu		285
	290	295
Lys Thr Arg Ile Asn Val Leu Ala Ala Gln Tyr Gln Ser Leu Leu Asn		300
305	310	315
Ser Tyr Gly Glu Pro Val Asp Asp Lys Ser Ala Thr Leu Leu Gln Leu		320
	325	330
Ile Thr Lys Phe Ala Thr Glu Tyr Cys Asn Thr Ile Glu Gly Thr Ala		335
	340	345
Lys Tyr Ile Glu Thr Ser Glu Leu Cys Gly Gly Ala Arg Ile Cys Tyr		350
	355	360
Ile Phe His Glu Thr Phe Gly Arg Thr Leu Glu Ser Val Asp Pro Leu		365
	370	375
Gly Gly Leu Asn Thr Ile Asp Ile Leu Thr Ala Ile Arg Asn Ala Thr		380
385	390	395
Gly Pro Arg Pro Ala Leu Phe Val Pro Glu Val Ser Phe Glu Leu Leu		400
	405	410
Val Lys Arg Gln Ile Lys Arg Leu Glu Glu Pro Ser Leu Arg Cys Val		415
	420	425
Glu Leu Val His Glu Glu Met Gln Arg Ile Ile Gln His Cys Ser Asn		430
	435	440
Tyr Ser Thr Gln Glu Leu Leu Arg Phe Pro Lys Leu His Asp Ala Ile		445
	450	455
Val Glu Val Val Thr Cys Leu Leu Arg Lys Arg Leu Pro Val Thr Asn		460
465	470	475
Glu Met Val His Asn Leu Val Ala Ile Glu Leu Ala Tyr Ile Asn Thr		480
	485	490
		495

Lys His Pro Asp Phe Ala Asp Ala Cys Gly Leu Met Asn Asn Asn Ile
 500 505 510
 Glu Glu Gln Arg Arg Asn Arg Leu Ala Arg Glu Leu Pro Ser Ala Val
 515 520 525
 Ser Arg Asp Lys Ser Ser Lys Val Pro Ser Ala Leu Ala Pro Ala Ser
 530 535 540
 Gln Glu Pro Ser Pro Ala Ala Ser Ala Glu Ala Asp Gly Lys Leu Ile
 545 550 555 560
 Gln Asp Ser Arg Arg Glu Thr Lys Asn Val Ala Ser Gly Gly Gly Gly
 565 570 575
 Val Gly Asp Gly Val Gln Glu Pro Thr Thr Gly Asn Trp Arg Gly Met
 580 585 590
 Leu Lys Thr Ser Lys Ala Glu Glu Leu Leu Ala Glu Glu Lys Ser Lys
 595 600 605
 Pro Ile Pro Ile Met Pro Ala Ser Pro Gln Lys Gly His Ala Val Asn
 610 615 620
 Leu Leu Asp Val Pro Val Pro Val Ala Arg Lys Leu Ser Ala Arg Glu
 625 630 635 640
 Gln Arg Asp Cys Glu Val Ile Glu Arg Leu Ile Lys Ser Tyr Phe Leu
 645 650 655
 Ile Val Arg Lys Asn Ile Gln Asp Ser Val Pro Lys Ala Val Met His
 660 665 670
 Phe Leu Val Asn His Val Lys Asp Thr Leu Gln Ser Glu Leu Val Gly
 675 680 685
 Gln Leu Tyr Lys Ser Ser Leu Leu Asp Asp Leu Leu Thr Glu Ser Glu
 690 695 700
 Asp Met Ala Gln Arg Arg Lys Glu Ala Ala Asp Met Leu Lys Ala Leu
 705 710 715 720
 Gln Gly Ala Ser Gln Ile Ile Ala Glu Ile Arg Glu Thr His Leu Trp
 725 730 735

<210> 88
 <211> 37
 <212> PRT
 <213> Homo Sapiens

<400> 88
 Met Gly Asp His Ala Trp Ser Phe Leu Lys Asp Phe Leu Ala Gly Gly
 1 5 10 15
 Val Ala Ala Ala Val Ser Lys Thr Ala Val Ala Pro Ile Glu Arg Val
 20 25 30
 Lys Leu Leu Leu Gln
 35

<210> 89
 <211> 1381
 <212> DNA
 <213> Homo Sapiens

<400> 89
 ccgcagccct agagccgccc aagggatggc gatggcgctac ttggcttgga gactggcgcg 60
 gcgttcgtgt ccgagttctc tgcaggtcnc tantttcccg gtagttcanc tgcncatgaa 120
 tanaacagca atgagagccn ctcncaaaga ctttgaaaat tcaactgaatc nagtgaaact 180
 ctngaaaaag gatccangaa acgaaatgaa nctnaaactc tncgcgctat atnancangc 240
 cncatgaanga cttgtntcat gcccnaccna nggtgntttg acttgatcna caagggggcca 300

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atggggacaca tggaatgccc ttggcancct gccnaagaa ctgccaggca naactatgtg      360
gatttggtgt ccantttgan tccntccttg gaatectcna atcnngtgga ncctggaaca      420
nacaggaaat ccactgggtt tgaaactctg gtggtgacct ccgaagatgg catcaciaag      480
atcatgttca accggcccaa aaagaaaaat gccataaaca ctgagatgta tcatgaaatt      540
atgcgtgcac ttaaagctgc cagcaaggat gactcaatca tcaactgttt aacaggaaat      600
ggtgactatt acagtagtgg gaatgatctg actaacttca ctgatattcc ccctggtgga      660
gtagaggaga aagctaaaaa taatgccgtt ttactgaggg aatttgtggg ctgttttata      720
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aaactgtgat gaccactaca gcagagtaaa gcatgtccaa ggaaggatgt gctgttacct     1260
ctgattttcca gtactggaac taaataagct tcattgtgcc ttttgtagtg ctagaatatc     1320
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<210> 90

<211> 298

<212> PRT

<213> Homo Sapiens

<400> 90

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          20          25          30
Val Ser Leu Pro Ser Leu Glu Ser Ser Asn Val Pro Gly Thr Arg Lys
          35          40          45
Ser Thr Gly Phe Glu Thr Leu Val Val Thr Ser Glu Asp Gly Ile Thr
          50          55          60
Lys Ile Met Phe Asn Arg Pro Lys Lys Lys Asn Ala Ile Asn Thr Glu
65          70          75          80
Met Tyr His Glu Ile Met Arg Ala Leu Lys Ala Ala Ser Lys Asp Asp
          85          90          95
Ser Ile Ile Thr Val Leu Thr Gly Asn Gly Asp Tyr Tyr Ser Ser Gly
          100          105          110
Asn Asp Leu Thr Asn Phe Thr Asp Ile Pro Pro Gly Gly Val Glu Glu
          115          120          125
Lys Ala Lys Asn Asn Ala Val Leu Leu Arg Glu Phe Val Gly Cys Phe
          130          135          140
Ile Asp Phe Pro Lys Pro Leu Ile Ala Val Val Asn Gly Pro Ala Val
145          150          155          160
Gly Ile Ser Val Thr Leu Leu Gly Leu Phe Asp Ala Val Tyr Ala Ser
          165          170          175
Asp Arg Ala Thr Phe His Thr Pro Phe Ser His Leu Gly Gln Ser Pro
          180          185          190
Glu Gly Cys Ser Ser Tyr Thr Phe Pro Lys Ile Met Ser Pro Ala Lys
          195          200          205
Ala Thr Glu Met Leu Ile Phe Gly Lys Lys Leu Thr Ala Gly Glu Ala
          210          215          220
Cys Ala Gln Leu Val Thr Glu Val Phe Pro Asp Ser Thr Phe Gln Lys

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<210> 91
<211> 1514
<212> DNA
<213> Homo Sapiens
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<210> 92
<211> 407
<212> PRT
<213> Homo Sapiens
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			20					25					30		
Asp	Phe	Glu	Pro	Tyr	Leu	Ser	Pro	Gln	Ala	Arg	Pro	Asn	Asn	Ala	Tyr
		35					40					45			

Thr Ala Met Ser Asp Ser Tyr Leu Pro Ser Tyr Tyr Ser Pro Ser Ile
 50 55 60
 Gly Phe Ser Tyr Ser Leu Gly Glu Ala Ala Trp Ser Thr Gly Gly Asp
 65 70 75 80
 Thr Ala Met Pro Tyr Leu Thr Ser Tyr Gly Gln Leu Ser Asn Gly Glu
 85 90 95
 Pro His Phe Leu Pro Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly
 100 105 110
 Ser Thr Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly
 115 120 125
 Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr
 130 135 140
 Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu
 145 150 155 160
 Gly Gly Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu
 165 170 175
 Asn Lys Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Leu
 180 185 190
 Lys Leu Gly Ser Thr Glu Val Ala Ser Asn Val Pro Lys Val Val Gly
 195 200 205
 Ser Ala Val Gly Ser Gly Ser Ile Thr Ser Asn Ile Val Ala Ser Asn
 210 215 220
 Ser Leu Pro Pro Ala Thr Ile Ala Pro Pro Lys Pro Ala Ser Trp Ala
 225 230 235 240
 Asp Ile Ala Ser Lys Pro Ala Lys Gln Gln Pro Lys Leu Lys Thr Lys
 245 250 255
 Asn Gly Ile Ala Gly Ser Ser Leu Pro Pro Pro Pro Ile Lys His Asn
 260 265 270
 Met Asp Ile Gly Thr Trp Asp Asn Lys Gly Pro Val Ala Lys Ala Pro
 275 280 285
 Ser Gln Ala Leu Val Gln Asn Ile Gly Gln Pro Thr Gln Gly Ser Pro
 290 295 300
 Gln Pro Val Gly Gln Gln Ala Asn Asn Ser Pro Pro Val Ala Gln Ala
 305 310 315 320
 Ser Val Gly Gln Gln Thr Gln Pro Leu Pro Pro Pro Pro Pro Gln Pro
 325 330 335
 Ala Gln Leu Ser Val Gln Gln Gln Ala Ala Gln Pro Thr Arg Trp Val
 340 345 350
 Ala Pro Arg Asn Arg Gly Ser Gly Phe Gly His Asn Gly Val Asp Gly
 355 360 365
 Asn Gly Val Gly Gln Ser Gln Ala Gly Ser Gly Ser Thr Pro Ser Glu
 370 375 380
 Pro His Pro Val Leu Glu Lys Leu Arg Ser Ile Asn Asn Tyr Asn Pro
 385 390 395 400
 Lys Asp Phe Asp Trp Glu Ile
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<210> 93

<211> 2236

<212> DNA

<213> Homo Sapiens

<400> 93

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60

120

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gtcatcaatg	aaccagccg	tctgcctctg	tttgatgcc	ttcggccgct	gatccactg	300
aagcaccagg	tggaatatga	tcagctgacc	ccccggcgct	ccaggaagct	gaaggaggtg	360
cgtctggacc	gtctgcaccc	cgaaggcctc	ggcctgagtg	tgcgtggtgg	cctggagttt	420
ggctgtgggc	tcttcatctc	ccacctcacc	aaaggcggtc	aggcagacag	cgctgggctc	480
caggtagggg	acgagatcgt	ccggatcaat	ggatattcca	tctcctcctg	tacccatgag	540
gaggtcatca	acctcattcg	aaccaagaaa	actgtgtcca	tcaaagttag	acacatcggc	600
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taagacccca	ctggagtctc	tctctctcca	tccctctcct	ctgccctctg	ctctaattgc	2160
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<210> 94

<211> 652

<212> PRT

<213> Homo Sapiens

<400> 94

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Ile	Glu	Asn	Asp	Ala	Glu	Lys	Asp	Tyr	Leu	Tyr	Asp	Val	Leu	Arg	Met
			20					25					30		
Tyr	His	Gln	Thr	Met	Asp	Val	Ala	Val	Leu	Val	Gly	Asp	Leu	Lys	Leu
		35					40					45			
Val	Ile	Asn	Glu	Pro	Ser	Arg	Leu	Pro	Leu	Phe	Asp	Ala	Ile	Arg	Pro
	50					55				60					
Leu	Ile	Pro	Leu	Lys	His	Gln	Val	Glu	Tyr	Asp	Gln	Leu	Thr	Pro	Arg
65				70					75					80	
Arg	Ser	Arg	Lys	Leu	Lys	Glu	Val	Arg	Leu	Asp	Arg	Leu	His	Pro	Glu
			85					90					95		

Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
 100 105 110
 Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
 115 120 125
 Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
 130 135 140
 Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
 145 150 155 160
 Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
 165 170 175
 Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
 180 185 190
 Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
 195 200 205
 Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
 210 215 220
 Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
 225 230 235 240
 Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
 245 250 255
 Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
 260 265 270
 Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
 275 280 285
 Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
 290 295 300
 Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
 305 310 315 320
 Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
 325 330 335
 Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
 340 345 350
 Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
 355 360 365
 Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
 370 375 380
 Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
 385 390 395 400
 Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
 405 410 415
 Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Asp Phe Arg Lys
 420 425 430
 Tyr Glu Glu Gly Phe Asp Pro Tyr Ser Met Phe Thr Pro Glu Gln Ile
 435 440 445
 Met Gly Lys Asp Val Arg Leu Leu Arg Ile Lys Lys Glu Gly Ser Leu
 450 455 460
 Asp Leu Ala Leu Glu Gly Gly Val Asp Ser Pro Ile Gly Lys Val Val
 465 470 475 480
 Val Ser Ala Val Tyr Glu Arg Gly Ala Ala Glu Arg His Gly Gly Ile
 485 490 495
 Val Lys Gly Asp Glu Ile Met Ala Ile Asn Gly Lys Ile Val Thr Asp
 500 505 510
 Tyr Thr Leu Ala Glu Ala Asp Ala Ala Leu Gln Lys Ala Trp Asn Gln
 515 520 525
 Gly Gly Asp Trp Ile Asp Leu Val Val Ala Val Cys Pro Pro Lys Glu

530 535 540
 Tyr Asp Asp Glu Leu Thr Phe Leu Leu Lys Ser Lys Arg Gly Asn Gln
 545 550 555 560
 Ile His Ala Leu Gly Asn Ser Glu Leu Arg Pro His Leu Val Asn Thr
 565 570 575
 Lys Pro Arg Thr Ser Leu Glu Arg Gly His Met Thr His Thr Arg Trp
 580 585 590
 His Pro Trp Asp Leu Asn Leu Ser Pro Arg Asn Leu Lys Leu Pro Leu
 595 600 605
 Ala Leu Asn Gln Gly Gln Ile Arg Asn Ser Ser Gly His Phe Phe Glu
 610 615 620
 Gly Gln Cys Gly Gly Lys Gly Ala Ala Ser Arg Leu Gly Glu Asp Leu
 625 630 635 640
 Lys Asp Pro Asp Ser His Ser Phe Pro Leu Ala Gln
 645 650

<210> 95
 <211> 831
 <212> DNA
 <213> Homo Sapiens

<400> 95
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 aaaacnattg cagaaaacat ttagattnta tgaaatatat aatnanancc aaaanccatt 180
 tgaanttaat nganccttac ctgtcntcac taaatcaggg ttntctgcgc caccnaaggg 240
 cngcccancg cctgctgtgt tggcttanta ggcctnagca tangggcagn tgcaatcctt 300
 tctctctnng gcggcanatg ggcttctgga anaacccttn ccttatcccc ancgcaaggc 360
 ggccccctccc ctgccctnaa aggaaacctc ntggacncag ggaatatang gccaccttga 420
 aggggtggact ggctatcntg gaagatcaga taccaccaag caatttggag acagttcctg 480
 ttgagaataa ccacggtttc catgaaaaga cagcagcgct gaagcttgag gccgagggcg 540
 aggccatgga agatgcagcc gcgccagggg acgaccgagg cggcacacag gagccagccc 600
 cagtgcctgc tgagccgttt gacaacacta cctacaagaa cctgcagcat catgactaca 660
 gcacgtacac cttcttagac ctcaacctcg aactctcaaa attcaggatg cctcagccct 720
 cctcaggccg ggagtcacct cgacactgag ggccctcggt gtgaagatga accttccacc 780
 gtcttctactg catcctggag tgcaaaaata aaatccactc aagagtcaaa a 831

<210> 96
 <211> 184
 <212> PRT
 <213> Homo Sapiens

<400> 96
 Arg Lys Asn Cys Arg Lys His Leu Asp Met Lys Tyr Ile Lys His Leu
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 Leu Pro Tyr Leu Ser Ser Leu Asn Gln Gly Leu Arg His Arg Ala Ala
 20 25 30
 Arg Leu Leu Cys Trp Leu Arg Pro His Gly Cys Asn Pro Phe Leu Leu
 35 40 45
 Arg Met Gly Phe Trp Asn Pro Leu Ile Pro Ala Arg Arg Pro Leu Pro
 50 55 60
 Cys Pro Arg Lys Pro Gly Arg Glu Tyr Ala Thr Leu Lys Gly Gly Leu
 65 70 75 80
 Ala Ile Glu Asp Gln Ile Pro Pro Ser Asn Leu Glu Thr Val Pro Val
 85 90 95

Glu Asn Asn His Gly Phe His Glu Lys Thr Ala Ala Leu Lys Leu Glu
 100 105 110
 Ala Glu Gly Glu Ala Met Glu Asp Ala Ala Ala Pro Gly Asn Asp Arg
 115 120 125
 Gly Gly Thr Gln Glu Pro Ala Pro Val Pro Ala Glu Pro Phe Asp Asn
 130 135 140
 Thr Thr Tyr Lys Asn Leu Gln His His Asp Tyr Ser Thr Tyr Thr Phe
 145 150 155 160
 Leu Asp Leu Asn Leu Glu Leu Ser Lys Phe Arg Met Pro Gln Pro Ser
 165 170 175
 Ser Gly Arg Glu Ser Pro Arg His
 180

<210> 97
 <211> 1008
 <212> DNA
 <213> Homo Sapiens

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 ccaaccaggg ctacatgcct tatttaaaca ggttcatttt ggaaaagggtc caagacaact 180
 ttgacaagat tgaattcaat aggatgtgtt ggaccctctg tgtcaaaaaa aacctcacia 240
 agaatccccct gctcattaca gaagaanatg catttaaaat atgggttatt ttcaactttt 300
 tatctgagga caagtatcca ttaattattg tgtcagaana gattgaatac ctgcttaaga 360
 agcttacaga agctatggga ggaggttggc agcaagaaca atttgaacat tataaaatca 420
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 gacagtttag caaaggcatg gaccggcaga ctgtgtctat ggcaattaat gaagtcttta 540
 atgaacttat attagatgtg ttaaagcagg gttacatgat gaaaaagggtc cacagacgga 600
 aaaactggac tgaacgatgg tttgtactaa aaccacaacat aatttcttac tatgtgagtg 660
 aggatctgaa ggataagaaa ggagacattc tcttgatga aaattgctgt gtagagtcct 720
 tgccctgacaa agatggaaaag aaatgccttt ttctcgtaaa atgttttgat aagacttttg 780
 aaatcagtg cttcagataag aanaanaaac aggagtggat tcaagccatt cattctacta 840
 ttcactctgtt gaagctgngc agccctccac canacaaaga agcennccag cttctnaaan 900
 aactccggna gaatcatctg gctgaacaag angaactgga gcgacaaatg aangaactcc 960
 aagcccgcca atgaaagcaa ncagcaagag ctggaaggcc ttncggaa 1008

<210> 98
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 98
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 20 25 30
 Asp Asp Asp Glu Gly Pro Val Ser Asn Gln Gly Tyr Met Pro Tyr Leu
 35 40 45
 Asn Arg Phe Ile Leu Glu Lys Val Gln Asp Asn Phe Asp Lys Ile Glu
 50 55 60
 Phe Asn Arg Met Cys Trp Thr Leu Cys Val Lys Lys Asn Leu Thr Lys
 65 70 75 80
 Asn Pro Leu Leu Ile Thr Glu Glu Ala Phe Lys Ile Trp Val Ile Phe
 85 90 95

Asn Phe Leu Ser Glu Asp Lys Tyr Pro Leu Ile Ile Val Ser Glu Ile
 100 105 110
 Glu Tyr Leu Leu Lys Lys Leu Thr Glu Ala Met Gly Gly Trp Gln
 115 120 125
 Gln Glu Gln Phe Glu His Tyr Lys Ile Asn Phe Asp Asp Ser Lys Asn
 130 135 140
 Gly Leu Ser Ala Trp Glu Leu Ile Glu Leu Ile Gly Asn Gly Gln Phe
 145 150 155 160
 Ser Lys Gly Met Asp Arg Gln Thr Val Ser Met Ala Ile Asn Glu Val
 165 170 175
 Phe Asn Glu Leu Ile Leu Asp Val Leu Lys Gln Gly Tyr Met Met Lys
 180 185 190
 Lys Gly His Arg Arg Lys Asn Trp Thr Glu Arg Trp Phe Val Leu Lys
 195 200 205
 Pro Asn Ile Ile Ser Tyr Tyr Val Ser Glu Asp Leu Lys Asp Lys Lys
 210 215 220
 Gly Asp Ile Leu Leu Asp Glu Asn Cys Cys Val Glu Ser Leu Pro Asp
 225 230 235 240
 Lys Asp Gly Lys Lys Cys Leu Phe Leu Val Lys Cys Phe Asp Lys Thr
 245 250 255
 Phe Glu Ile Ser Ala Ser Asp Lys Lys Gln Glu Trp Ile Gln Ala Ile
 260 265 270
 His Ser Thr Ile His Leu Leu Lys Leu Ser Pro Pro Pro Lys Glu Ala
 275 280 285
 Gln Leu Leu Lys Leu Arg Asn His Leu Ala Glu Gln Glu Leu Glu Arg
 290 295 300
 Gln Met Glu Leu Gln Ala Arg Gln
 305 310

<210> 99
 <211> 1009
 <212> DNA
 <213> Homo Sapiens

<400> 99
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 tgaagaacac attcgggctt tagaaaagga ggaagaagaa gaaaaacaga agagtttgct 180
 gagagaaaagg agacgacagc gaaaaaatag ggaatcttct cagatatttt tagatgaatt 240
 acatgaacat ggacaactgc attctatgtc atcttggtat gaattgtatc caactattag 300
 ttctgatatt agattcacta atatgcttgg tcagcctgga tcaactgcac ttgatctttt 360
 caagttttat gttgaggatc tttaaagcacg ttatcatgac gagaagaaga taataaaaaga 420
 cattctaaag gataaaggat ttgtagttga agtaaact acttttgaag attttgtggc 480
 gataatcagt tcaactaaaa gatcaactac attagatgct ggaaatatca aattggcttt 540
 caatagttta ctagaaaagg cagaagcccg tgaacgtgaa agagaaaaag aagaggctcg 600
 gaagatgaaa cgaaaagaat ctgcatttaa gagtatgtta aaacaagctg ctccctccgat 660
 agaattggat gctgtctggg aagatatccg tgagagattt gtaaaagagc cagcatttga 720
 ggacataact ctagaatctg aaagaaaaagc aatattttaa gattttatgc atgtgcttga 780
 gcatgaatgt cagcatcatc attcaaagaa caagaaacat tctaagaaat ctaaaaaaca 840
 tcataggaaa cgttcccgct ctcgatcggt gtcagattca ngatgatgat gatagccatt 900
 caaagaaaaa aagacagcga tgagaagtct cggctctgnt canaacattc ttccantngc 960
 agagtctgag agaagtntaa aaagtcaaaa nagcatagan aggaaagtt 1009

<210> 100
 <211> 292

<212> PRT

<213> Homo Sapiens

<400> 100

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Lys Glu Asp Ala Leu Ile Cys Phe Glu Glu His Ile Arg Ala Leu Glu
          35           40           45
Lys Glu Glu Glu Glu Glu Lys Gln Lys Ser Leu Leu Arg Glu Arg Arg
          50           55           60
Arg Gln Arg Lys Asn Arg Glu Ser Phe Gln Ile Phe Leu Asp Glu Leu
65           70           75           80
His Glu His Gly Gln Leu His Ser Met Ser Ser Trp Met Glu Leu Tyr
          85           90           95
Pro Thr Ile Ser Ser Asp Ile Arg Phe Thr Asn Met Leu Gly Gln Pro
          100          105          110
Gly Ser Thr Ala Leu Asp Leu Phe Lys Phe Tyr Val Glu Asp Leu Lys
          115          120          125
Ala Arg Tyr His Asp Glu Lys Lys Ile Ile Lys Asp Ile Leu Lys Asp
          130          135          140
Lys Gly Phe Val Val Glu Val Asn Thr Thr Phe Glu Asp Phe Val Ala
145          150          155          160
Ile Ile Ser Ser Thr Lys Arg Ser Thr Thr Leu Asp Ala Gly Asn Ile
          165          170          175
Lys Leu Ala Phe Asn Ser Leu Leu Glu Lys Ala Glu Ala Arg Glu Arg
          180          185          190
Glu Arg Glu Lys Glu Glu Ala Arg Lys Met Lys Arg Lys Glu Ser Ala
          195          200          205
Phe Lys Ser Met Leu Lys Gln Ala Ala Pro Pro Ile Glu Leu Asp Ala
          210          215          220
Val Trp Glu Asp Ile Arg Glu Arg Phe Val Lys Glu Pro Ala Phe Glu
225          230          235          240
Asp Ile Thr Leu Glu Ser Glu Arg Lys Arg Ile Phe Lys Asp Phe Met
          245          250          255
His Val Leu Glu His Glu Cys Gln His His His Ser Lys Asn Lys Lys
          260          265          270
His Ser Lys Lys Ser Lys Lys His His Arg Lys Arg Ser Arg Ser Arg
          275          280          285
Ser Gly Ser Asp
          290

```

<210> 101

<211> 983

<212> DNA

<213> Homo Sapiens

<400> 101

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agggtgacaat agatatagaa gtacgttgat gtgcgaagat gtattttggt ttagccagcg      60
aggaaaaaag aatcagtttg attatacatt taccaaacat taagaattta atatggtaac      120
ttttattttca gtattaaaaat agcaatttta tttattactt ttttatatat agaatttgac      180
accaaattttt ggaacttaaa aagaagattc ttaaaaactta caatccagat tacgatgagg      240
acctggtgca ggaagcttca tctgaagatg tcctgggcgt tcatatggtg gacaaagaca      300
cagagagaga cattgagatg aaacggcaac tacggcgact acgggagctc cacctataca      360

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gcacatggaa gaagtaccaa gaggcgatga agacatcctt gggagttcca caacgtgagc 420
gtgacgaagg ctccctggggc aagccattgt gtccaccgga gatactctcg gagacgttgc 480
caggctctgt gaagaaaagg gtatgctttc catcagaaga tcatctagag gagtttatag 540
cagaacatct ccctgaagca tccaatcaga gtctcctcac tgttgcccat gcagacgcag 600
gcacccaaac caacggtgac ctggaagacc tggaggagca tgggccaggg cagacagtct 660
ctgaggaagc cacagaagtt cacatgatgg agggggaccc agacacactg gccgaacttc 720
tgatcagggg tgtacttcag gagctgtcca gttacaacgg cgaggaggag gacccanagg 780
aggtgaagac atccttggga gttccacaac gtggtgacct ggaagacctg gaggagcatg 840
tgncagggca gnnnttctct gaggaagcca caggggttca catgatgcag gtggaccag 900
ccacgctggc aaagagtgc ctggaagacc tggaggagca tgtgccagag cagacagtct 960
ctgaggaagc cacaggggtt cac 983

```

<210> 102

<211> 230

<212> PRT

<213> Homo Sapiens

<400> 102

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Met Val Asp Lys Asp Thr Glu Arg Asp Ile Glu Met Lys Arg Gln Leu
 1          5          10          15
Arg Arg Leu Arg Glu Leu His Leu Tyr Ser Thr Trp Lys Lys Tyr Gln
          20          25          30
Glu Ala Met Lys Thr Ser Leu Gly Val Pro Gln Arg Glu Arg Asp Glu
          35          40          45
Gly Ser Leu Gly Lys Pro Leu Cys Pro Pro Glu Ile Leu Ser Glu Thr
          50          55          60
Leu Pro Gly Ser Val Lys Lys Arg Val Cys Phe Pro Ser Glu Asp His
65          70          75          80
Leu Glu Glu Phe Ile Ala Glu His Leu Pro Glu Ala Ser Asn Gln Ser
          85          90          95
Leu Leu Thr Val Ala His Ala Asp Ala Gly Thr Gln Thr Asn Gly Asp
          100          105          110
Leu Glu Asp Leu Glu Glu His Gly Pro Gly Gln Thr Val Ser Glu Glu
          115          120          125
Ala Thr Glu Val His Met Met Glu Gly Asp Pro Asp Thr Leu Ala Glu
          130          135          140
Leu Leu Ile Arg Asp Val Leu Gln Glu Leu Ser Ser Tyr Asn Gly Glu
          145          150          155          160
Glu Glu Asp Pro Glu Val Lys Thr Ser Leu Gly Val Pro Gln Arg Gly
          165          170          175
Asp Leu Glu Asp Leu Glu Glu His Val Gly Gln Phe Ser Glu Glu Ala
          180          185          190
Thr Gly Val His Met Met Gln Val Asp Pro Ala Thr Leu Ala Lys Ser
          195          200          205
Asp Leu Glu Asp Leu Glu Glu His Val Pro Glu Gln Thr Val Ser Glu
          210          215          220
Glu Ala Thr Gly Val His
          225          230

```

<210> 103

<211> 843

<212> DNA

<213> Homo Sapiens

<400> 103

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aatnccccgct gcaggtcgac actagtggat ccaaagaatt cggcacgagg caagttctgg      60
gagctggaca cggaccacga cctgctcatc gacgcggacg acctggcgcg gcacaatgac      120
cacgcccttt ctaccaagat gatagacagg atcttctcag gagcagtcac acgaggcaga      180
aaagtgcaga aggaagggaa gatcagctat gccgactttg tctggttttt gatctctgag      240
gaagacaaaa aaacaccgac cagcatcgag tactggttcc gctgcatgga cctggacggg      300
gacggcgccc tgtccatgtt cgagctcgag tacttctacg aggagcagtg ccgaaggctg      360
gacagcatgg ccatacgagg cctgcccttc caggactgcc tctgccagat gctggacctg      420
gtcaagccga ggactgaagg gaagatcacg ctgcaggacc tgaagcgctg caagctggcc      480
aacgtcttct tcgacacctt cttcaacatc gagaagtncc tcgaccacga gcagaaagag      540
cagatctccc tgctcagggg cgggtgacagc ggcgggcccg agctctcgga ctggggagaag      600
tnccggccga agagtncgac atcctggtgg ccgangaaac cgtggggana nccctgggga      660
agacgggttc naaggcgaac tcacccccnt ggancanaaa ctgantgcgc tgcgctcccc      720
gctgggccan aggccttctt ccaagcgctt cccgctgggg cgccgtggaa ctgttncaaa      780
ttcccctgcg gggacaagaa cttgaaaccg ctgtganncc ccccncnana accnccccg      840
gnt                                                                    843

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<210> 104

<211> 197

<212> PRT

<213> Homo Sapiens

<400> 104

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Arg Cys Arg Ser Thr Leu Val Asp Pro Lys Asn Ser Ala Arg Gly Lys
1          5          10          15
Phe Trp Glu Leu Asp Thr Asp His Asp Leu Leu Ile Asp Ala Asp Asp
20          25          30
Leu Ala Arg His Asn Asp His Ala Leu Ser Thr Lys Met Ile Asp Arg
35          40          45
Ile Phe Ser Gly Ala Val Thr Arg Gly Arg Lys Val Gln Lys Glu Gly
50          55          60
Lys Ile Ser Tyr Ala Asp Phe Val Trp Phe Leu Ile Ser Glu Glu Asp
65          70          75          80
Lys Lys Thr Pro Thr Ser Ile Glu Tyr Trp Phe Arg Cys Met Asp Leu
85          90          95
Asp Gly Asp Gly Ala Leu Ser Met Phe Glu Leu Glu Tyr Phe Tyr Glu
100         105         110
Glu Gln Cys Arg Arg Leu Asp Ser Met Ala Ile Glu Ala Leu Pro Phe
115         120         125
Gln Asp Cys Leu Cys Gln Met Leu Asp Leu Val Lys Pro Arg Thr Glu
130         135         140
Gly Lys Ile Thr Leu Gln Asp Leu Lys Arg Cys Lys Leu Ala Asn Val
145         150         155         160
Phe Phe Asp Thr Phe Phe Asn Ile Glu Lys Leu Asp His Glu Gln Lys
165         170         175
Glu Gln Ile Ser Leu Leu Arg Asp Gly Asp Ser Gly Gly Pro Glu Leu
180         185         190
Ser Asp Trp Glu Lys
195

```

<210> 105

<211> 2264

<212> DNA

<213> Homo Sapiens

<400> 105


```

ctagcacaag tacacaggcc ccagccgctt cccctactgg tgtagttcct ggtaccaaata 60
atgcagtacc tgacacgtcc acttaccagt atgatgaatc ttcaggatat tactatgatc 120
cgacaacagg gctctattat gaccccaact cgcaatacta ctataattcc ttgaccagc 180
agtaccttta ctgggatggg gaaaaagaga cctacgtgcc agctgcagag tctagctccc 240
accagcagtc gggcctgcct cctgcaaaaag aggggaaaaga gaagaaggag aaaccaaga 300
gcaaaacagc ccagcagatt gccaaagaca tggaaacgtg ggctaagagt ttgaataagc 360
agaaagaaaa ctttaaaaat agctttcagc ctgtcaattc cttgagggaa gaagaaagga 420
gagaatctgc tgcagcagac gctggccttg ctctctttga gaagaaggga gccttagctg 480
aaaggcagca gctcatccca gaattgggtg gaaatggaga tgaggagaaat cccctcaaaa 540
ggggtctggg tgctgcttac agtgggtgaca gtgacaatga ggaggagctg gtggagagac 600
ttgagagtga ggaagagaag ctagctgact ggaagaagat ggctgtctg ctctgccggc 660
gccagttccc gaacaaagat gccctagtca ggcaccagca actctcagac cttcacaagc 720
aaaacatgga catctaccga cgatccaggc tgagcgagca ggagctggaa gccttggagc 780
taaggagagag agagatgaaa taccgagacc gagctgcaga aagacgggag aagtacggca 840
ttccagaacc tccagagccc aagcgcaaga agcagtttga tgccggcact gtgaattacg 900
agcaaccacac caaagatggc attgaccaca gtaacattgg caacaagatg ctgcaggcca 960
tgggctggcg ggaaggctct ggcttgggac gaaagtgtca aggcatcagc gctcccattg 1020
aggctcaagt tgggctaaaag ggagctggcc taggagccaa aggcagcgca tatggtttgt 1080
cgggcgccga ttcctacaaa gatgctgtcc ggaaagccat gtttgcccg ttcactgaga 1140
tggagtgaga gagagagaga gagagagatg acaaggagca caagaagtgg tccatctccc 1200
gaattcgctg ttaccgcctg tctctttaag ggcattgcct gtgctgttaa tagatcttag 1260
ggtgaaccac ttcattctgc agggttctcc ctcccacctt aaagaagttc cccttatgtg 1320
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agtggattgt ttatactcca gtgtacatag tgtaatgtag cgtgtttaca tgtgtagcct 1440
atgttgtggg tccatcagccc ctcacattcc taggggttg agatgctgta ggtgggtatgt 1500
gacaccaaaag ccacctctgt catttgttgt gatgtctttt cttggcaaaa gccttgtgta 1560
tatttgtata ttacacattt gtacagaatt ttggaagatt ttcaatccaa gttgccaaat 1620
ctggctcctt taaaaaagaa ataccttgag aaaaaaaann aannaaaaaa aannccnann 1680
nnntttttta aangggngcg gggccaannn ttttccnncc gggnggggna nnaagtaaan 1740
ngtcccaaat ncccccaaaa nggagccenn ttaaaattaa angggccgcn nttttaaaaan 1800
nttengaata gggnaaaacc tnggggtttn ccaaatttaa cccctttgaa aaaaaanccc 1860
ctttcncaaa anngggntaa tanccaaaaa gggcccccan ccatttttgc cntttccaaa 1920
aaaatttgnc caancnnnaa atgggnaaan ggggaatcca attttttaaa gggnnaaaaan 1980
gggttttaaac nnacgggntt ccaaanttgn ttgggggaat ttttaaattc ccaannnccc 2040
aaggggggnc atttagnngn cccenaatcc cccaaaaaant ggttcnnggn tnaaanncngc 2100
cnnnnccnaa tttntanggg tttacttngn tttaaaaaac cnccccaaaa actccccenn 2160
gaaccnaaaa aanaaaaagga ngccattttt ngnnngnaaac ttttttaann nnccnnttaa 2220
anggggttaa aannnnnnnn tnnnccnaa tttttcaaan aang 2264

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<210> 106

<211> 381

<212> PRT

<213> Homo Sapiens

<400> 106

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Ser Thr Ser Thr Gln Ala Pro Ala Ala Ser Pro Thr Gly Val Val Pro
1          5          10          15
Gly Thr Lys Tyr Ala Val Pro Asp Thr Ser Thr Tyr Gln Tyr Asp Glu
20          25          30
Ser Ser Gly Tyr Tyr Tyr Asp Pro Thr Thr Gly Leu Tyr Tyr Asp Pro
35          40          45
Asn Ser Gln Tyr Tyr Tyr Asn Ser Leu Thr Gln Gln Tyr Leu Tyr Trp
50          55          60
Asp Gly Glu Lys Glu Thr Tyr Val Pro Ala Ala Glu Ser Ser Ser His
65          70          75          80

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Gln Gln Ser Gly Leu Pro Pro Ala Lys Glu Gly Lys Glu Lys Lys Glu
 85 90 95
 Lys Pro Lys Ser Lys Thr Ala Gln Gln Ile Ala Lys Asp Met Glu Arg
 100 105 110
 Trp Ala Lys Ser Leu Asn Lys Gln Lys Glu Asn Phe Lys Asn Ser Phe
 115 120 125
 Gln Pro Val Asn Ser Leu Arg Glu Glu Glu Arg Arg Glu Ser Ala Ala
 130 135 140
 Ala Asp Ala Gly Phe Ala Leu Phe Glu Lys Lys Gly Ala Leu Ala Glu
 145 150 155 160
 Arg Gln Gln Leu Ile Pro Glu Leu Val Arg Asn Gly Asp Glu Glu Asn
 165 170 175
 Pro Leu Lys Arg Gly Leu Val Ala Ala Tyr Ser Gly Asp Ser Asp Asn
 180 185 190
 Glu Glu Glu Leu Val Glu Arg Leu Glu Ser Glu Glu Glu Lys Leu Ala
 195 200 205
 Asp Trp Lys Lys Met Ala Cys Leu Leu Cys Arg Arg Gln Phe Pro Asn
 210 215 220
 Lys Asp Ala Leu Val Arg His Gln Gln Leu Ser Asp Leu His Lys Gln
 225 230 235 240
 Asn Met Asp Ile Tyr Arg Arg Ser Arg Leu Ser Glu Gln Glu Leu Glu
 245 250 255
 Ala Leu Glu Leu Arg Glu Arg Glu Met Lys Tyr Arg Asp Arg Ala Ala
 260 265 270
 Glu Arg Arg Glu Lys Tyr Gly Ile Pro Glu Pro Pro Glu Pro Lys Arg
 275 280 285
 Lys Lys Gln Phe Asp Ala Gly Thr Val Asn Tyr Glu Gln Pro Thr Lys
 290 295 300
 Asp Gly Ile Asp His Ser Asn Ile Gly Asn Lys Met Leu Gln Ala Met
 305 310 315 320
 Gly Trp Arg Glu Gly Ser Gly Leu Gly Arg Lys Cys Gln Gly Ile Thr
 325 330 335
 Ala Pro Ile Glu Ala Gln Val Arg Leu Lys Gly Ala Gly Leu Gly Ala
 340 345 350
 Lys Gly Ser Ala Tyr Gly Leu Ser Gly Ala Asp Ser Tyr Lys Asp Ala
 355 360 365
 Val Arg Lys Ala Met Phe Ala Arg Phe Thr Glu Met Glu
 370 375 380

<210> 107

<211> 1367

<212> DNA

<213> Homo Sapiens

<400> 107

ggcacacagg cctcgaggct gtctctgaca agtgttcaca ggaggtgggg acgcctctgc 60
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 tcgaatgcat attcttcagc gagttccacc ccacgctggg acccaagatc acctatcagg 180
 tccctgaaga cttcatctcc cgagagctgt ttgacacagt ccaagtgtac atcatcacca 240
 agccagagct gcagaacaag cttatcactg tcacagctat ggaaaagaag ctgatcggct 300
 gtctgtgtg catcgaacac aagaagtaca gccgcaatgc tctctcttcc aacctgggct 360
 tcgtgtgtga tgcccaggcc aagacctgcg cctctgagcc cattgtttaa aagctggctg 420
 gctatctgac cacactagag ctagagagca gcttcgtgtc catggaggag agcaagcaga 480
 agttggtgcc catcatgacc atcttgctgg aggagctaaa tgcctcaggc cgggtgcactc 540
 tgcccattga tgagtccaac accatccact tgaaggtgat tgagcagcgg ccagaccctc 600

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cgggtggccca ggagtatgat gtacctgtct ttaccaaaga caaggaggat ttcttcaact 660
cacagtggga cctcactaca caacaaatcc tgccctacat tgatgggttc cgccacatcc 720
agaagatttc agcagaggca gatgtggagc tcaacctggt gcgcattgct atccagaacc 780
tgctgtacta cggcggttggt acactggtgt ccatacctcca gtactccaat gtatactgcc 840
caacgcccaa ggtccaggac ctggtagatg acaagtcctt gcaagaggca tgtctatcct 900
acgtgaccaa gcaagggcac aagagggccca gtctcgggga tgtgttccag ctatactgca 960
gcctgagccc tggcactacc gtgcgagacc tcattggccg ccacccccag cagctgcagc 1020
atgttgatga acggaagctg atccagttcg ggcttatgaa gaacctcatc aggcgactac 1080
agaagtatcc tgtgcgggtg actcgggaag agcagagcca ccctgcccgg ctttatacag 1140
gctgccacag ctatgacgag atctgctgca agacaggcat gagctaccat gagctggatg 1200
agcggcttga aaatgacccc aacatcatca tctgctggaa gtgaggctgg tagtgactgg 1260
atggacacat tgctgtgggt agtccctcct actaggaggc ttgtcatact gtctagaggt 1320
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<210> 108

<211> 413

<212> PRT

<213> Homo Sapiens

<400> 108

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Asp Thr Gly Leu Glu Ala Val Ser Asp Lys Cys Ser Gln Glu Val Gly
1           5           10           15
Thr Pro Leu Arg Glu Glu Arg Gly Ala Thr Gly Leu Gly Pro Val Ile
20          25          30
Ala Met Gly Ser Gly Cys Arg Ile Glu Cys Ile Phe Phe Ser Glu Phe
35          40          45
His Pro Thr Leu Gly Pro Lys Ile Thr Tyr Gln Val Pro Glu Asp Phe
50          55          60
Ile Ser Arg Glu Leu Phe Asp Thr Val Gln Val Tyr Ile Ile Thr Lys
65          70          75          80
Pro Glu Leu Gln Asn Lys Leu Ile Thr Val Thr Ala Met Glu Lys Lys
85          90          95
Leu Ile Gly Cys Pro Val Cys Ile Glu His Lys Lys Tyr Ser Arg Asn
100         105         110
Ala Leu Leu Phe Asn Leu Gly Phe Val Cys Asp Ala Gln Ala Lys Thr
115         120         125
Cys Ala Leu Glu Pro Ile Val Lys Lys Leu Ala Gly Tyr Leu Thr Thr
130         135         140
Leu Glu Leu Glu Ser Ser Phe Val Ser Met Glu Ser Lys Gln Lys
145         150         155         160
Leu Val Pro Ile Met Thr Ile Leu Leu Glu Glu Leu Asn Ala Ser Gly
165         170         175
Arg Cys Thr Leu Pro Ile Asp Glu Ser Asn Thr Ile His Leu Lys Val
180         185         190
Ile Glu Gln Arg Pro Asp Pro Pro Val Ala Gln Glu Tyr Asp Val Pro
195         200         205
Val Phe Thr Lys Asp Lys Glu Asp Phe Phe Asn Ser Gln Trp Asp Leu
210         215         220
Thr Thr Gln Gln Ile Leu Pro Tyr Ile Asp Gly Phe Arg His Ile Gln
225         230         235         240
Lys Ile Ser Ala Glu Ala Asp Val Glu Leu Asn Leu Val Arg Ile Ala
245         250         255
Ile Gln Asn Leu Leu Tyr Tyr Gly Val Val Thr Leu Val Ser Ile Leu
260         265         270
Gln Tyr Ser Asn Val Tyr Cys Pro Thr Pro Lys Val Gln Asp Leu Val

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275 280 285
 Asp Asp Lys Ser Leu Gln Glu Ala Cys Leu Ser Tyr Val Thr Lys Gln
 290 295 300
 Gly His Lys Arg Ala Ser Leu Arg Asp Val Phe Gln Leu Tyr Cys Ser
 305 310 315 320
 Leu Ser Pro Gly Thr Thr Val Arg Asp Leu Ile Gly Arg His Pro Gln
 325 330 335
 Gln Leu Gln His Val Asp Glu Arg Lys Leu Ile Gln Phe Gly Leu Met
 340 345 350
 Lys Asn Leu Ile Arg Arg Leu Gln Lys Tyr Pro Val Arg Val Thr Arg
 355 360 365
 Glu Glu Gln Ser His Pro Ala Arg Leu Tyr Thr Gly Cys His Ser Tyr
 370 375 380
 Asp Glu Ile Cys Cys Lys Thr Gly Met Ser Tyr His Glu Leu Asp Glu
 385 390 395 400
 Arg Leu Glu Asn Asp Pro Asn Ile Ile Ile Cys Trp Lys
 405 410

<210> 109

<211> 2113

<212> DNA

<213> Homo Sapiens

<400> 109

gtgcggttgga gaacgcggag cggacggatt cgattcaacg gggttccgga ccgcgctgcg 60
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 tcgatgatgc cttacagtgc tactccgaag ctattaagct ggatccccac aaccacgtgc 180
 tgtacagcaa ccgttctgct gcctatgcca agaaaggaga ctaccagaag gcttatgagg 240
 atggctgcaa gactgtcgac ctaaagcctg actggggcaa gggctattca cgaaaagcag 300
 cagctctaga gttcttaaac cgctttgaag aagccaagcg aacctatgag gagggcttaa 360
 aacacgaggg aaataaccct caactgaaag agggtttaca gaatatggag gccaggttgg 420
 cagagagaaa attcatgaac cctttcaaca tgcctaattc gtatcagaag ttggagagtg 480
 atcccaggac aaggacacta ctacgtgatc ctacctaccg ggagctgata gacgagctac 540
 gaaacaagcc ttctgacctg ggcacgaaac tacaagatcc ccggatcatg accactctca 600
 gcgtctctct tggggctgat ctgggcagta tggatgagga ggaagagatt gcaacacctc 660
 caccaccacc ccctcccaaa aaggagacca agccagagcc aatggaagaa gatcttccag 720
 agaataagaa gcaggcactg aaagaaaaag agctggggaa cgatgcctac aagaagaaag 780
 actttgacac agccttgaag cattacgaca aagccaagga gctggacccc actaacatga 840
 cttacattac caatcaagca gcggtatact ttgaaaaggg cgactacaat aagtgcgggg 900
 agctttgtga gaaggccatt gaagtgggga gagaaaaccg agaagactat cgacagattg 960
 ccaaagcata tgctcgaatt ggcaactcct acttcaaaga agaaaagtac aaggatgcca 1020
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 agcaggcaga gaaaatcctg aaggagcaag agcggctggc ctacataaac cccgacctgg 1140
 ctttggagga gaagaacaaa ggcaacgagt gttttcagaa aggggactat cccagggcca 1200
 tgaagcatta tacagaagcc atcaaaaagga acccgaaaga tgccaaatta tacagcaatc 1260
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 gtatccagct ggagccgacc ttcattcaagg gttatacacg gaaagccgct gcgctggaag 1380
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 gctgtaagga ggcggcagac ggctaccagc gctgatatgat ggcgctagac aaccggcacg 1500
 acagccccga agatgtgaag cgacgagcca tggccgaccc tgaggtgcag cagatcatga 1560
 gtgaccagc catgcgcctt atcctggaac agatgcagaa ggacccccag gcactcagcg 1620
 aacacttaaa gaatcctgta atagcacaga agatccagaa gctgatggat gtgggtctga 1680
 ttgcaattcg gtgatgactt gttcatcccc ccttcccttc gccctcatgt ggaaagagga 1740
 gctgggaccg cggcgagcag cacggagcgg aaggagagagc aggggagaga aggcctcatc 1800
 tctctatatt tatacataac cccggggaag acacagagac tcgtacctgc gctgtttgtg 1860

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ccgccgctgc ctctgggccc tcccagcaca cgcattggtct cttcaccgct gccctcgagt 1920
tccatgtctc tttccctcgc ccctagttgc tgtctcggct gctctcccat agttggtttt 1980
ttttttatctt ggggcagtg gcatgttatg gggaggggag ggggttcttc cagcctcagg 2040
tcccagctgt ctacggttgt ttattctgcg tccccttctc caataaaaca agccagttgg 2100
gcgtggttat aac 2113

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<210> 110

<211> 543

<212> PRT

<213> Homo Sapiens

<400> 110

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Met Glu Gln Val Asn Glu Leu Lys Glu Lys Gly Asn Lys Ala Leu Ser
 1          5          10          15
Val Gly Asn Ile Asp Asp Ala Leu Gln Cys Tyr Ser Glu Ala Ile Lys
          20          25          30
Leu Asp Pro His Asn His Val Leu Tyr Ser Asn Arg Ser Ala Ala Tyr
          35          40          45
Ala Lys Lys Gly Asp Tyr Gln Lys Ala Tyr Glu Asp Gly Cys Lys Thr
          50          55          60
Val Asp Leu Lys Pro Asp Trp Gly Lys Gly Tyr Ser Arg Lys Ala Ala
          65          70          75          80
Ala Leu Glu Phe Leu Asn Arg Phe Glu Glu Ala Lys Arg Thr Tyr Glu
          85          90          95
Glu Gly Leu Lys His Glu Ala Asn Asn Pro Gln Leu Lys Glu Gly Leu
          100          105          110
Gln Asn Met Glu Ala Arg Leu Ala Glu Arg Lys Phe Met Asn Pro Phe
          115          120          125
Asn Met Pro Asn Leu Tyr Gln Lys Leu Glu Ser Asp Pro Arg Thr Arg
          130          135          140
Thr Leu Leu Ser Asp Pro Thr Tyr Arg Glu Leu Ile Glu Gln Leu Arg
          145          150          155          160
Asn Lys Pro Ser Asp Leu Gly Thr Lys Leu Gln Asp Pro Arg Ile Met
          165          170          175
Thr Thr Leu Ser Val Leu Leu Gly Val Asp Leu Gly Ser Met Asp Glu
          180          185          190
Glu Glu Glu Ile Ala Thr Pro Pro Pro Pro Pro Pro Pro Lys Lys Glu
          195          200          205
Thr Lys Pro Glu Pro Met Glu Glu Asp Leu Pro Glu Asn Lys Lys Gln
          210          215          220
Ala Leu Lys Glu Lys Glu Leu Gly Asn Asp Ala Tyr Lys Lys Lys Asp
          225          230          235          240
Phe Asp Thr Ala Leu Lys His Tyr Asp Lys Ala Lys Glu Leu Asp Pro
          245          250          255
Thr Asn Met Thr Tyr Ile Thr Asn Gln Ala Ala Val Tyr Phe Glu Lys
          260          265          270
Gly Asp Tyr Asn Lys Cys Arg Glu Leu Cys Glu Lys Ala Ile Glu Val
          275          280          285
Gly Arg Glu Asn Arg Glu Asp Tyr Arg Gln Ile Ala Lys Ala Tyr Ala
          290          295          300
Arg Ile Gly Asn Ser Tyr Phe Lys Glu Glu Lys Tyr Lys Asp Ala Ile
          305          310          315          320
His Phe Tyr Asn Lys Ser Leu Ala Glu His Arg Thr Pro Asp Val Leu
          325          330          335
Lys Lys Cys Gln Gln Ala Glu Lys Ile Leu Lys Glu Gln Glu Arg Leu

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340 345 350
 Ala Tyr Ile Asn Pro Asp Leu Ala Leu Glu Glu Lys Asn Lys Gly Asn
 355 360 365
 Glu Cys Phe Gln Lys Gly Asp Tyr Pro Gln Ala Met Lys His Tyr Thr
 370 375 380
 Glu Ala Ile Lys Arg Asn Pro Lys Asp Ala Lys Leu Tyr Ser Asn Arg
 385 390 395 400
 Ala Ala Cys Tyr Thr Lys Leu Leu Glu Phe Gln Leu Ala Leu Lys Asp
 405 410 415
 Cys Glu Glu Cys Ile Gln Leu Glu Pro Thr Phe Ile Lys Gly Tyr Thr
 420 425 430
 Arg Lys Ala Ala Ala Leu Glu Ala Met Lys Asp Tyr Thr Lys Ala Met
 435 440 445
 Asp Val Tyr Gln Lys Ala Leu Asp Leu Asp Ser Ser Cys Lys Glu Ala
 450 455 460
 Ala Asp Gly Tyr Gln Arg Cys Met Met Ala Gln Tyr Asn Arg His Asp
 465 470 475 480
 Ser Pro Glu Asp Val Lys Arg Arg Ala Met Ala Asp Pro Glu Val Gln
 485 490 495
 Gln Ile Met Ser Asp Pro Ala Met Arg Leu Ile Leu Glu Gln Met Gln
 500 505 510
 Lys Asp Pro Gln Ala Leu Ser Glu His Leu Lys Asn Pro Val Ile Ala
 515 520 525
 Gln Lys Ile Gln Lys Leu Met Asp Val Gly Leu Ile Ala Ile Arg
 530 535 540

<210> 111

<211> 2765

<212> DNA

<213> Homo Sapiens

<400> 111

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gtcccagagt gtgccgagga actggccttt cgcaagggag acatcctgac cgtcatagag      240
cagaacacag ggggactgga aggatggtgg ctgtgctcgt tacacggctc gcaaggcatt      300
gtcccaggca accgggtgaa gcttctgatt ggteccatgc aggagactgc ctccagtcac      360
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cagggaattt accaagtccc cactggccac ggcacccaag aacaagaggt atatcagggtg      540
ccaccatcag tgcagagaag cattggggga accagtgggc cccacgtggg taaaaagggtg      600
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<210> 112
 <211> 834
 <212> PRT
 <213> Homo Sapiens

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<400> 112
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35 40 45
His Gly Arg Gln Gly Ile Val Pro Gly Asn Arg Val Lys Leu Leu Ile
50 55 60
Gly Pro Met Gln Glu Thr Ala Ser Ser His Glu Gln Pro Ala Ser Gly
65 70 75 80
Leu Met Gln Gln Thr Phe Gly Gln Gln Lys Leu Tyr Gln Val Pro Asn
85 90 95
Pro Gln Ala Ala Pro Arg Asp Thr Ile Tyr Gln Val Pro Pro Ser Tyr
100 105 110
Gln Asn Gln Gly Ile Tyr Gln Val Pro Thr Gly His Gly Thr Gln Glu
115 120 125
Gln Glu Val Tyr Gln Val Pro Pro Ser Val Gln Arg Ser Ile Gly Gly
130 135 140
Thr Ser Gly Pro His Val Gly Lys Lys Val Ile Thr Pro Val Arg Thr
145 150 155 160
Gly His Gly Tyr Val Tyr Glu Tyr Pro Ser Arg Tyr Gln Lys Asp Val
165 170 175
Tyr Asp Ile Pro Pro Ser His Thr Thr Gln Gly Val Tyr Asp Ile Pro
180 185 190

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Pro Ser Ser Ala Lys Gly Pro Val Phe Ser Val Pro Val Gly Glu Ile
 195 200 205
 Lys Pro Gln Gly Val Tyr Asp Ile Pro Pro Thr Lys Gly Val Tyr Ala
 210 215 220
 Ile Pro Pro Ser Ala Cys Arg Asp Glu Ala Gly Leu Arg Glu Lys Asp
 225 230 235 240
 Tyr Asp Phe Pro Pro Pro Met Arg Gln Ala Gly Arg Pro Asp Leu Arg
 245 250 255
 Pro Glu Gly Val Tyr Asp Ile Pro Pro Thr Cys Thr Lys Pro Ala Gly
 260 265 270
 Lys Asp Leu His Val Lys Tyr Asn Cys Asp Ile Pro Gly Ala Ala Glu
 275 280 285
 Pro Val Ala Arg Arg His Gln Ser Leu Ser Pro Asn His Pro Pro Pro
 290 295 300
 Gln Leu Gly Gln Ser Val Gly Ser Gln Asn Asp Ala Tyr Asp Val Pro
 305 310 315 320
 Arg Gly Val Gln Phe Leu Glu Pro Pro Ala Glu Thr Ser Glu Lys Ala
 325 330 335
 Asn Pro Gln Glu Arg Asp Gly Val Tyr Asp Val Pro Leu His Asn Pro
 340 345 350
 Pro Asp Ala Lys Gly Ser Arg Asp Leu Val Asp Gly Ile Asn Arg Leu
 355 360 365
 Ser Phe Ser Ser Thr Gly Ser Thr Arg Ser Asn Met Ser Thr Ser Ser
 370 375 380
 Thr Ser Ser Lys Glu Ser Ser Leu Ser Ala Ser Pro Ala Gln Asp Lys
 385 390 395 400
 Arg Leu Phe Leu Asp Pro Asp Thr Ala Ile Glu Arg Leu Gln Arg Leu
 405 410 415
 Gln Gln Ala Leu Glu Met Gly Val Ser Ser Leu Met Ala Leu Val Thr
 420 425 430
 Thr Asp Trp Arg Cys Tyr Gly Tyr Met Glu Arg His Ile Asn Glu Ile
 435 440 445
 Arg Thr Ala Val Asp Lys Val Glu Leu Phe Leu Lys Glu Tyr Leu His
 450 455 460
 Phe Val Lys Gly Ala Val Ala Asn Ala Ala Cys Leu Pro Glu Leu Ile
 465 470 475 480
 Leu His Asn Lys Met Lys Arg Glu Leu Gln Arg Val Glu Asp Ser His
 485 490 495
 Gln Ile Leu Ser Gln Thr Ser His Asp Leu Asn Glu Cys Ser Trp Ser
 500 505 510
 Leu Asn Ile Leu Ala Ile Asn Lys Pro Gln Asn Lys Cys Asp Asp Leu
 515 520 525
 Asp Arg Phe Val Met Val Ala Lys Thr Val Pro Asp Asp Ala Lys Gln
 530 535 540
 Leu Thr Thr Thr Ile Asn Thr Asn Ala Glu Ala Leu Phe Arg Pro Gly
 545 550 555 560
 Pro Gly Ser Leu His Leu Lys Asn Gly Pro Glu Ser Ile Met Asn Ser
 565 570 575
 Thr Glu Tyr Pro His Gly Gly Ser Gln Gly Gln Leu Leu His Pro Gly
 580 585 590
 Asp His Lys Ala Gln Ala His Asn Lys Ala Leu Pro Pro Gly Leu Ser
 595 600 605
 Lys Glu Gln Ala Pro Asp Cys Ser Ser Ser Asp Gly Ser Glu Arg Ser
 610 615 620
 Trp Met Asp Asp Tyr Asp Tyr Val His Leu Gln Gly Lys Glu Glu Phe


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<210> 113
<211> 3429
<212> DNA
<213> Homo Sapiens
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<210> 114

<211> 906

<212> PRT

<213> Homo Sapiens

<400> 114

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              20              25              30
Val Thr Gln Val Thr Thr Leu Val Asn Thr Asn Ser Lys Gly Pro Ser
              35              40              45
Asn Lys Lys Arg Gly Arg Ser Lys Lys Ala His Val Leu Ala Ala Ser
              50              55              60
Val Glu Gln Ala Thr Glu Asn Phe Leu Glu Lys Gly Asp Lys Ile Ala
              65              70              75              80
Lys Glu Ser Gln Phe Leu Lys Glu Glu Leu Val Ala Ala Val Glu Asp

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Ala Leu Gln Glu Lys Asp Val Asp Gly Leu Asp Arg Thr Ala Gly Ala
 530 535 540
 Ile Arg Gly Arg Ala Ala Arg Val Ile His Val Val Thr Ser Glu Met
 545 550 555 560
 Asp Asn Tyr Glu Pro Gly Val Tyr Thr Glu Lys Val Leu Glu Ala Thr
 565 570 575
 Lys Leu Leu Ser Asn Thr Val Met Pro Arg Phe Thr Glu Gln Val Glu
 580 585 590
 Ala Ala Val Glu Ala Leu Ser Ser Asp Pro Ala Gln Pro Met Asp Glu
 595 600 605
 Asn Glu Phe Ile Asp Ala Ser Arg Leu Val Tyr Asp Gly Ile Arg Asp
 610 615 620
 Ile Arg Lys Ala Val Leu Met Ile Arg Thr Pro Glu Glu Leu Asp Asp
 625 630 635 640
 Ser Asp Phe Glu Thr Glu Asp Phe Asp Val Arg Ser Arg Thr Ser Val
 645 650 655
 Gln Thr Glu Asp Asp Gln Leu Ile Ala Gly Gln Ser Ala Arg Ala Ile
 660 665 670
 Met Ala Gln Leu Pro Gln Glu Gln Lys Ala Lys Ile Ala Glu Gln Val
 675 680 685
 Ala Ser Phe Gln Glu Glu Lys Ser Lys Leu Asp Ala Glu Val Ser Lys
 690 695 700
 Trp Asp Asp Ser Gly Asn Asp Ile Ile Val Leu Ala Lys Gln Met Cys
 705 710 715 720
 Met Ile Met Met Glu Met Thr Asp Phe Thr Arg Gly Lys Gly Pro Leu
 725 730 735
 Lys Asn Thr Ser Asp Val Ile Ser Ala Ala Lys Lys Ile Ala Glu Ala
 740 745 750
 Gly Ser Arg Met Asp Lys Leu Gly Arg Thr Ile Ala Asp His Cys Pro
 755 760 765
 Asp Ser Ala Cys Lys Gln Asp Leu Leu Ala Tyr Leu Gln Arg Ile Ala
 770 775 780
 Leu Tyr Cys His Gln Leu Asn Ile Cys Ser Lys Val Lys Ala Glu Val
 785 790 795 800
 Gln Asn Leu Gly Gly Glu Leu Val Val Ser Gly Val Asp Ser Ala Met
 805 810 815
 Ser Leu Ile Gln Ala Ala Lys Asn Leu Met Asn Ala Val Val Gln Thr
 820 825 830
 Val Lys Ala Ser Tyr Val Ala Ser Thr Lys Tyr Gln Lys Ser Gln Gly
 835 840 845
 Met Ala Ser Leu Asn Leu Pro Ala Val Ser Trp Lys Met Lys Ala Pro
 850 855 860
 Glu Lys Lys Pro Leu Val Lys Arg Glu Lys Gln Asp Glu Thr Gln Thr
 865 870 875 880
 Lys Ile Lys Arg Ala Ser Gln Lys Lys His Val Asn Pro Val Gln Ala
 885 890 895
 Leu Ser Glu Phe Lys Ala Met Asp Ser Ile
 900 905

<210> 115
 <211> 1701
 <212> DNA
 <213> Homo Sapiens

<400> 115

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cctgataaga atccccaaat gcaggagaca aactttaaag aaataagttt tgcatatgaa      180
gtactatcaa atcctgagaa gcgtgagtta tatgacagat acggagagca aggtcttcgg      240
gaaggcagcg gcggaggtgg gtggcatgga ttgatatttt ctctcacctg tttttgtggg      300
ggattgttcg gcttcatggg caatcagagt agaagtcgaa atggcagaag aagaggagag      360
gacatgatgc atccactcaa agtatcttta gcatgcagtg gccaaggcgg aaagtctgga      420
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ggggaagcag accaggcccc agagtggaac ccggagacat tggtcttttt gctaccagga      780
gaaaagaaca tggaggtatt tcagagagat ggggaatgatt tgcacatgac atataaaata      840
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cctttcacac atggattatt ataagtttca atcctgggat ctgtgcttga tttttatcag     1560
ttttgtgtag atttttatgt ttcatatatt aaattttaa cccacattgt aaagtttcta     1620
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<210> 116
 <211> 415
 <212> PRT
 <213> Homo Sapiens

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<400> 116
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Ala Gly Ala Ser Glu Asn Glu Leu Lys Lys Ala Tyr Arg Lys Leu Ala
      20             25             30
Lys Glu Tyr His Pro Asp Lys Asn Pro Gln Met Gln Glu Thr Asn Phe
      35             40             45
Lys Glu Ile Ser Phe Ala Tyr Glu Val Leu Ser Asn Pro Glu Lys Arg
      50             55             60
Glu Leu Tyr Asp Arg Tyr Gly Glu Gln Gly Leu Arg Glu Gly Ser Gly
      65             70             75             80
Gly Gly Gly Trp His Gly Leu Ile Phe Ser Leu Thr Val Phe Cys Gly
      85             90             95
Gly Leu Phe Gly Phe Met Gly Asn Gln Ser Arg Ser Arg Asn Gly Arg
      100            105            110
Arg Arg Gly Glu Asp Met Met His Pro Leu Lys Val Ser Leu Glu Asp
      115            120            125
Leu Tyr Asn Gly Lys Thr Thr Lys Leu Gln Leu Ser Lys Asn Val Leu
      130            135            140
Cys Ser Ala Cys Ser Gly Gln Gly Gly Lys Ser Gly Ala Val Gln Lys

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<210> 117
<211> 1821
<212> DNA
<213> Homo Sapiens
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<400> 117							
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aqaaqaaaac	ctcatggatg	cacaagtcaa	agctattgct	gatactggtg	caaatgtcgt	900	

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agtaacaggt ggcaaagtgg cagacatggc tcttcattat gcaaataaat ataatatcat      960
gttagtgagg ctaaactcaa aatgggatct ccgaagactt tgtaaaactg ttggtgctac      1020
agctcttcc agattgacac ctccgtcct tgaagaaatg ggacactgtg acagtgttta      1080
cctctcagaa gttggagata ctgaggtggt ggtttttaag catgaaaagg aagatggcgc      1140
catttctacc atagtacttc gaggctctac agacaatctg atggatgaca tagaaagggt      1200
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ttttcttatt ctctttaa atagagttat tttgtgtttg tattcttggc tggatgttat      1800
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<210> 118

<211> 548

<212> PRT

<213> Homo Sapiens

<400> 118

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      20              25              30
Ile Gln Ala Cys Lys Glu Leu Ala Gln Thr Thr Arg Thr Ala Tyr Gly
      35              40              45
Pro Lys Gly Met Asn Lys Met Val Ile Asn His Leu Glu Lys Leu Phe
      50              55              60
Val Thr Asn Asp Ala Ala Thr Ile Leu Arg Glu Leu Glu Val Gln His
      65              70              75              80
Pro Ala Ala Lys Met Ile Val Met Ala Ser His Met Gln Glu Gln Glu
      85              90              95
Val Gly Asp Gly Thr Asn Phe Val Leu Val Phe Ala Gly Ala Leu Leu
      100             105             110
Glu Leu Ala Glu Glu Leu Leu Arg Ile Gly Leu Ser Val Ser Glu Val
      115             120             125
Ile Glu Gly Tyr Glu Ile Ala Cys Arg Lys Ala His Glu Ile Leu Pro
      130             135             140
Asn Leu Val Cys Cys Ser Ala Lys Asn Leu Arg Asp Ile Asp Glu Val
      145             150             155             160
Ser Ser Leu Leu Arg Thr Ser Ile Met Ser Lys Gln Tyr Gly Asn Glu
      165             170             175
Val Phe Leu Ala Lys Leu Ile Ala Gln Ala Cys Val Ser Ile Phe Pro
      180             185             190
Asp Ser Gly His Phe Asn Val Asp Asn Ile Arg Val Cys Lys Ile Leu
      195             200             205
Gly Ser Gly Ile Ser Ser Ser Ser Val Leu His Gly Met Val Phe Lys
      210             215             220
Lys Glu Thr Glu Gly Asp Val Thr Ser Val Lys Asp Ala Lys Ile Ala
      225             230             235             240
Val Tyr Ser Cys Pro Phe Asp Gly Met Ile Thr Glu Thr Lys Gly Thr
      245             250             255

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Val Leu Ile Lys Thr Ala Glu Glu Leu Met Asn Phe Ser Lys Gly Glu
 260 265 270
 Glu Asn Leu Met Asp Ala Gln Val Lys Ala Ile Ala Asp Thr Gly Ala
 275 280 285
 Asn Val Val Val Thr Gly Gly Lys Val Ala Asp Met Ala Leu His Tyr
 290 295 300
 Ala Asn Lys Tyr Asn Ile Met Leu Val Arg Leu Asn Ser Lys Trp Asp
 305 310 315 320
 Leu Arg Arg Leu Cys Lys Thr Val Gly Ala Thr Ala Leu Pro Arg Leu
 325 330 335
 Thr Pro Pro Val Leu Glu Glu Met Gly His Cys Asp Ser Val Tyr Leu
 340 345 350
 Ser Glu Val Gly Asp Thr Gln Val Val Val Phe Lys His Glu Lys Glu
 355 360 365
 Asp Gly Ala Ile Ser Thr Ile Val Leu Arg Gly Ser Thr Asp Asn Leu
 370 375 380
 Met Asp Asp Ile Glu Arg Val Val Asp Asp Gly Val Asn Thr Phe Lys
 385 390 395 400
 Val Leu Thr Arg Asp Lys Arg Leu Val Pro Gly Gly Gly Ala Thr Glu
 405 410 415
 Ile Glu Leu Ala Lys Gln Ile Thr Ser Tyr Gly Glu Thr Cys Pro Gly
 420 425 430
 Leu Glu Gln Tyr Ala Ile Lys Lys Phe Ala Glu Ala Phe Glu Ala Ile
 435 440 445
 Pro Arg Ala Leu Ala Glu Asn Ser Gly Val Lys Ala Asn Glu Val Ile
 450 455 460
 Ser Lys Leu Tyr Ala Val His Gln Glu Gly Asn Lys Asn Val Gly Leu
 465 470 475 480
 Asp Ile Glu Ala Glu Val Pro Ala Val Lys Asp Met Leu Glu Ala Gly
 485 490 495
 Ile Leu Asp Thr Tyr Leu Gly Lys Tyr Trp Ala Ile Lys Leu Ala Thr
 500 505 510
 Asn Ala Ala Val Thr Val Leu Arg Val Asp Gln Ile Ile Met Ala Lys
 515 520 525
 Pro Ala Gly Gly Pro Lys Pro Pro Ser Gly Lys Lys Asp Trp Asp Asp
 530 535 540
 Asp Gln Asn Asp
 545

<210> 119
 <211> 1321
 <212> DNA
 <213> Homo Sapiens

<400> 119
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 tccaggagaa ggtgttcaag ggcttggacc tccttgagaa ggctgccgaa atgttatcgc 180
 agctcgactt gttcagccga aatgaagatt tggaagagat tgcttcacc gacctgaagt 240
 accttttggg gccagcgttt caaggagccc tcaccatgaa acaagtcaac cccagcaagc 300
 gtctagatca tttgcagcgg gctcgagaac actttataaa ctacttaact cagtgccatt 360
 gctatcatgt ggcagagttt gagctgccc aaaccatgaa caactctgct gaaaatcaca 420
 ctgccaatte ctccatggct taccatagtc tcgttgctat ggcattctca agacaggcta 480
 aaatacagag atacaagcag aagaaggagt tggagcatag gttgtctgca atgaaatctg 540
 ctgtggaag tggtcaagca gatgatgagc gtgttcgtga atattatctt cttcaccttc 600


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agaggtggat tgatatcagc ttagaagaga ttgagagcat tgaccaggaa ataaagatcc      660
tgagagaaag agactcttca agagaggcat caacttctaa ctcattctgc caggagaggc      720
ctccagtga acccttcatt ctcaactcga acatggctca agccaaagta tttggagctg      780
gttatccaag tctgccaact atgacggtga gtgactggta tgagcaacat cggaaatatg      840
gagcattacc ggatcaggga atagccaagg cagcaccaga ggaattcaga aaagcagctc      900
agcaacagga agaacaagaa gaaaaggagg aagaggatga tgaacaaaca ctccacagag      960
ccggggagtg ggatgactgg aaggacaccc atcctagggg ctatgggaac cgacagaaca     1020
tgggctgata tccccacaac accacaggac tgcagggtgc acaactccct gccaaaggaaa     1080
accatgcagt cctccccctc ctggtctcct gcttcagctc tgtacaacga gggcaaagat     1140
gctaaatctt gctttgcatt cagtaaagtg tcaagtgatt aagtgtgtat ttgtacccta     1200
gatgatatga accagcagtc ttgttttggc atcatcctca tcatgttgta ttccagcttc     1260
ttaagtggaa ggaaaagagt gctgagaaat ggctctgtat aatctatggc tatccgaatt     1320
c                                                                           1321

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<210> 120
 <211> 339
 <212> PRT
 <213> Homo Sapiens

<400> 120

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Met Ala Ala Glu Asp Glu Leu Gln Leu Pro Arg Leu Pro Glu Leu Phe
  1              5              10              15
Glu Thr Gly Arg Gln Leu Leu Asp Glu Val Glu Val Ala Thr Glu Pro
      20              25              30
Ala Gly Ser Arg Ile Val Gln Glu Lys Val Phe Lys Gly Leu Asp Leu
      35              40              45
Leu Glu Lys Ala Ala Glu Met Leu Ser Gln Leu Asp Leu Phe Ser Arg
      50              55              60
Asn Glu Asp Leu Glu Glu Ile Ala Ser Thr Asp Leu Lys Tyr Leu Leu
      65              70              75              80
Val Pro Ala Phe Gln Gly Ala Leu Thr Met Lys Gln Val Asn Pro Ser
      85              90              95
Lys Arg Leu Asp His Leu Gln Arg Ala Arg Glu His Phe Ile Asn Tyr
      100             105             110
Leu Thr Gln Cys His Cys Tyr His Val Ala Glu Phe Glu Leu Pro Lys
      115             120             125
Thr Met Asn Asn Ser Ala Glu Asn His Thr Ala Asn Ser Ser Met Ala
      130             135             140
Tyr Pro Ser Leu Val Ala Met Ala Ser Gln Arg Gln Ala Lys Ile Gln
      145             150             155             160
Arg Tyr Lys Gln Lys Lys Glu Leu Glu His Arg Leu Ser Ala Met Lys
      165             170             175
Ser Ala Val Glu Ser Gly Gln Ala Asp Asp Glu Arg Val Arg Glu Tyr
      180             185             190
Tyr Leu Leu His Leu Gln Arg Trp Ile Asp Ile Ser Leu Glu Glu Ile
      195             200             205
Glu Ser Ile Asp Gln Glu Ile Lys Ile Leu Arg Glu Arg Asp Ser Ser
      210             215             220
Arg Glu Ala Ser Thr Ser Asn Ser Ser Arg Gln Glu Arg Pro Pro Val
      225             230             235             240
Lys Pro Phe Ile Leu Thr Arg Asn Met Ala Gln Ala Lys Val Phe Gly
      245             250             255
Ala Gly Tyr Pro Ser Leu Pro Thr Met Thr Val Ser Asp Trp Tyr Glu
      260             265             270
Gln His Arg Lys Tyr Gly Ala Leu Pro Asp Gln Gly Ile Ala Lys Ala

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275	280	285
Ala Pro Glu Glu Phe Arg Lys Ala Ala Gln Gln Gln Glu Glu Gln Glu		
290	295	300
Glu Lys Glu Glu Glu Asp Asp Glu Gln Thr Leu His Arg Ala Arg Glu		
305	310	315
Trp Asp Asp Trp Lys Asp Thr His Pro Arg Gly Tyr Gly Asn Arg Gln		
325	330	335
Asn Met Gly		

<210> 121
 <211> 2965
 <212> DNA
 <213> Homo Sapiens

<400> 121

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ccttagcggt	cctctctggg	cggcgggcggc	ggcggtctcg	ttgacgcctc	ctccgccagc	120
tgagcccgcg	ggagcccagg	acgccgcttc	cccgcgccatc	cccgtcctcc	gaggccgggc	180
gcctggtcat	ggcgccagccg	ggccccggtt	cccagcctga	cgtttctctt	cagcaacggg	240
tagcagaatt	ggaaaaaatt	aatgcagaat	ttttacgtgc	acaacagcag	cttgaacaag	300
aatttaata	aaagagagca	aaatttaagg	agttatat	ggctaaagag	gaggatctga	360
agaggcaaaa	tgcagtatta	caagctgcac	aagatgattt	gggacacctt	cgaaccagc	420
tgtgggaagc	tcaagcagag	atggagaata	ttaaggcgat	tgccacagtc	tctgagaaca	480
ccaagcaaga	agctatagat	gaagtgaata	gacagtggag	agaagaagtt	gcttcacttc	540
aggctgttat	gaaagaaaca	gttcgtgact	atgagcacca	gttccacctt	aggctggagc	600
aggagcgaa	acagtgggca	cagtataag	aatacgcaga	gagggaaata	gctgatttaa	660
gaagaaggct	gtctgaagg	caagaggagg	aaaatttaga	aaatgaaatg	aaaaaggccc	720
aagaggatgc	tgagaaactt	cggctcgttg	tgatgccaat	ggaaaaggaa	attgcagctt	780
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aagaactgaa	tcattatctg	gaagctgaga	aatctttag	gactgatcta	gagatgtatg	900
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aattgcatga	agtttgccat	ctcttgaggc	aagagcgaca	acaacacaa	cagttaaaac	1020
atacgtggca	gaaggccaat	gaccagtttc	tggaaatctca	gcgtttactg	atgagagaca	1080
tgcagcgaat	ggagattgtg	ctaacttcag	aacagctccg	acaagttgaa	gaactgaaga	1140
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cagatgttga	ggaagaaata	aaaataccag	tagtgtgtgc	tttaactcaa	gaagaatctt	1260
cagcccagtt	atcaaatgaa	gaggagcatt	tagacagcac	ccgtggctca	gttcattcct	1320
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atthtggacc	actggttaga	gcagattcag	tgtctgagaa	ctttgatact	gcatcccttg	1560
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cactcgtcct	aagagcccag	gcctccgaga	tcttacttga	agagttacag	caggggcttt	2040
cccaggcaaa	gagggatgtt	caggaacaga	tggcggtgct	gatgcagtca	cgggaacagg	2100
tttcagaaga	gctggtgagg	ttacagaaag	ataatgacag	tctccaggga	aagcacagcc	2160
tgcattgtgtc	attacagcaa	gcagaagact	tcattcctcc	agacactaca	gaggcactgc	2220
gggagttggt	attaaaatac	cgtgaggaca	tcattaatgt	gcggacagca	gcagaccacg	2280
tagaagaaaa	gctgaaggct	gagatacttt	tcctaaaaga	gcagatccaa	gcagaacagt	2340

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gtttaaaaga aaatcttgaa gaaactctgc aactagaaat agaaaactgc aaggaggaaa 2400
tagcttctat ttctagccta aaagctgaat tagaaagaat aaaagtggaa aaaggacagt 2460
tggagtccac attaagagag aagtctcaac agcttgagag tcttcaggaa ataaagatca 2520
gtttggaaga gcagttaaag aaagagactg ctgctaaggc taccgttgaa cagctaattgt 2580
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tcattcttag agcaacagta attattattt aactcttaac tgaagaaaga gaagtcacaa 2880
caaaaggaag actggagaaa tgcttacttc tagagggaga agactgtgcg gcacaggaaa 2940
cagcaaacag tggggtgatc tgcag 2965

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<210> 122

<211> 862

<212> PRT

<213> Homo Sapiens

<400> 122

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20     25     30
Gln Gln Leu Glu Gln Glu Phe Asn Gln Lys Arg Ala Lys Phe Lys Glu
35     40     45
Leu Tyr Leu Ala Lys Glu Glu Asp Leu Lys Arg Gln Asn Ala Val Leu
50     55     60
Gln Ala Ala Gln Asp Asp Leu Gly His Leu Arg Thr Gln Leu Trp Glu
65     70     75     80
Ala Gln Ala Glu Met Glu Asn Ile Lys Ala Ile Ala Thr Val Ser Glu
85     90     95
Asn Thr Lys Gln Glu Ala Ile Asp Glu Val Lys Arg Gln Trp Arg Glu
100    105    110
Glu Val Ala Ser Leu Gln Ala Val Met Lys Glu Thr Val Arg Asp Tyr
115    120    125
Glu His Gln Phe His Leu Arg Leu Glu Gln Glu Arg Thr Gln Trp Ala
130    135    140
Gln Tyr Arg Glu Tyr Ala Glu Arg Glu Ile Ala Asp Leu Arg Arg Arg
145    150    155    160
Leu Ser Glu Gly Gln Glu Glu Asn Leu Glu Asn Glu Met Lys Lys
165    170    175
Ala Gln Glu Asp Ala Glu Lys Leu Arg Ser Val Val Met Pro Met Glu
180    185    190
Lys Glu Ile Ala Ala Leu Lys Asp Lys Leu Thr Glu Ala Glu Asp Lys
195    200    205
Ile Lys Glu Leu Glu Ala Ser Lys Val Lys Glu Leu Asn His Tyr Leu
210    215    220
Glu Ala Glu Lys Ser Cys Arg Thr Asp Leu Glu Met Tyr Val Ala Val
225    230    235    240
Leu Asn Thr Gln Lys Ser Val Leu Gln Glu Asp Ala Glu Lys Leu Arg
245    250    255
Lys Glu Leu His Glu Val Cys His Leu Leu Glu Gln Glu Arg Gln Gln
260    265    270
His Asn Gln Leu Lys His Thr Trp Gln Lys Ala Asn Asp Gln Phe Leu
275    280    285
Glu Ser Gln Arg Leu Leu Met Arg Asp Met Gln Arg Met Glu Ile Val

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290 295 300
 Leu Thr Ser Glu Gln Leu Arg Gln Val Glu Glu Leu Lys Lys Lys Asp
 305 310 315 320
 Gln Glu Asp Asp Glu Gln Gln Arg Leu Asn Lys Arg Lys Asp His Lys
 325 330 335
 Lys Ala Asp Val Glu Glu Glu Ile Lys Ile Pro Val Val Cys Ala Leu
 340 345 350
 Thr Gln Glu Glu Ser Ser Ala Gln Leu Ser Asn Glu Glu Glu His Leu
 355 360 365
 Asp Ser Thr Arg Gly Ser Val His Ser Leu Asp Ala Gly Leu Leu Leu
 370 375 380
 Pro Ser Gly Asp Pro Phe Ser Lys Ser Asp Asn Asp Met Phe Lys Asp
 385 390 395 400
 Gly Leu Arg Arg Ala Gln Ser Thr Asp Ser Leu Gly Thr Ser Gly Ser
 405 410 415
 Leu Gln Ser Lys Ala Leu Gly Tyr Asn Tyr Lys Ala Lys Ser Ala Gly
 420 425 430
 Asn Leu Asp Glu Ser Asp Phe Gly Pro Leu Val Gly Ala Asp Ser Val
 435 440 445
 Ser Glu Asn Phe Asp Thr Ala Ser Leu Gly Ser Leu Gln Met Pro Ser
 450 455 460
 Gly Phe Met Leu Thr Lys Asp Gln Glu Arg Ala Ile Lys Ala Met Thr
 465 470 475 480
 Pro Glu Gln Glu Glu Thr Ala Ser Leu Leu Ser Ser Val Thr Gln Gly
 485 490 495
 Met Glu Ser Ala Tyr Val Ser Pro Ser Gly Tyr Arg Leu Val Ser Glu
 500 505 510
 Thr Glu Trp Asn Leu Leu Gln Lys Glu Val His Asn Ala Gly Asn Lys
 515 520 525
 Leu Gly Arg Arg Cys Asp Met Cys Ser Asn Tyr Glu Lys Gln Leu Gln
 530 535 540
 Gly Ile Gln Ile Gln Glu Ala Glu Thr Arg Asp Gln Val Lys Lys Leu
 545 550 555 560
 Gln Leu Met Leu Arg Gln Ala Asn Asp Gln Leu Glu Lys Thr Met Lys
 565 570 575
 Asp Lys Gln Glu Leu Glu Asp Phe Ile Lys Gln Ser Ser Glu Asp Ser
 580 585 590
 Ser His Gln Ile Ser Ala Leu Val Leu Arg Ala Gln Ala Ser Glu Ile
 595 600 605
 Leu Leu Glu Glu Leu Gln Gln Gly Leu Ser Gln Ala Lys Arg Asp Val
 610 615 620
 Gln Glu Gln Met Ala Val Leu Met Gln Ser Arg Glu Gln Val Ser Glu
 625 630 635 640
 Glu Leu Val Arg Leu Gln Lys Asp Asn Asp Ser Leu Gln Gly Lys His
 645 650 655
 Ser Leu His Val Ser Leu Gln Gln Ala Glu Asp Phe Ile Leu Pro Asp
 660 665 670
 Thr Thr Glu Ala Leu Arg Glu Leu Val Leu Lys Tyr Arg Glu Asp Ile
 675 680 685
 Ile Asn Val Arg Thr Ala Ala Asp His Val Glu Glu Lys Leu Lys Ala
 690 695 700
 Glu Ile Leu Phe Leu Lys Glu Gln Ile Gln Ala Glu Gln Cys Leu Lys
 705 710 715 720
 Glu Asn Leu Glu Glu Thr Leu Gln Leu Glu Ile Glu Asn Cys Lys Glu
 725 730 735

Glu Ile Ala Ser Ile Ser Ser Leu Lys Ala Glu Leu Glu Arg Ile Lys
 740 745 750
 Val Glu Lys Gly Gln Leu Glu Ser Thr Leu Arg Glu Lys Ser Gln Gln
 755 760 765
 Leu Glu Ser Leu Gln Glu Ile Lys Ile Ser Leu Glu Glu Gln Leu Lys
 770 775 780
 Lys Glu Thr Ala Ala Lys Ala Thr Val Glu Gln Leu Met Phe Glu Glu
 785 790 795 800
 Lys Asn Lys Ala Gln Arg Leu Gln Thr Glu Leu Asp Val Ser Glu Gln
 805 810 815
 Val Gln Arg Asp Phe Val Lys Leu Ser Gln Thr Leu Gln Val Gln Leu
 820 825 830
 Glu Arg Ile Arg Gln Ala Asp Ser Leu Glu Arg Ile Arg Ala Ile Leu
 835 840 845
 Asn Asp Thr Lys Leu Thr Asp Ile Asn Gln Leu Pro Glu Thr
 850 855 860

<210> 123
 <211> 544
 <212> DNA
 <213> Homo Sapiens

<400> 123
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 ttggtttggc attaaaggac cttgctaagc agtactctga cagactagaa tgctgtgaaa 180
 atgaagtaga aaaggttaata gaagaaatac gttgcaaggc aattgagcgt ggaacaggaa 240
 atgacaatta tagaacaacg ggaattgcta caatcgaggt gtttttacca ccaagactaa 300
 aaaaagatag gaaaaacttg ttggagaccc gattgcacat cactggcaga gaactgaggt 360
 ccaaaatagc tgaaaccttt ggacttcaag aanattatat caaaattgtc ataaataaga 420
 agcaactacn actagggaaa acccttgaag ancaaggcgt ggctcacaat gtgaaagcga 480
 tgggtgcttg actaaaacaa tctgaagagg acgcgaggaa aaacttccag ttagaggaag 540
 agga 544

<210> 124
 <211> 178
 <212> PRT
 <213> Homo Sapiens

<400> 124
 Glu Trp Arg Gly Ala Gly Met Ala Gln Lys Lys Tyr Leu Gln Ala Lys
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 Leu Thr Gln Phe Leu Arg Glu Asp Arg Ile Gln Leu Trp Lys Pro Pro
 20 25 30
 Tyr Thr Asp Glu Asn Lys Lys Val Gly Leu Ala Leu Lys Asp Leu Ala
 35 40 45
 Lys Gln Tyr Ser Asp Arg Leu Glu Cys Cys Glu Asn Glu Val Glu Lys
 50 55 60
 Val Ile Glu Glu Ile Arg Cys Lys Ala Ile Glu Arg Gly Thr Gly Asn
 65 70 75 80
 Asp Asn Tyr Arg Thr Thr Gly Ile Ala Thr Ile Glu Val Phe Leu Pro
 85 90 95
 Pro Arg Leu Lys Lys Asp Arg Lys Asn Leu Leu Glu Thr Arg Leu His
 100 105 110
 Ile Thr Gly Arg Glu Leu Arg Ser Lys Ile Ala Glu Thr Phe Gly Leu

115 120 125
 Gln Glu Tyr Ile Lys Ile Val Ile Asn Lys Lys Gln Leu Leu Gly Lys
 130 135 140
 Thr Leu Glu Gln Gly Val Ala His Asn Val Lys Ala Met Val Leu Glu
 145 150 155 160
 Leu Lys Gln Ser Glu Glu Asp Ala Arg Lys Asn Phe Gln Leu Glu Glu
 165 170 175
 Glu Glu

<210> 125
 <211> 1302
 <212> DNA
 <213> Homo Sapiens

<400> 125
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 ggtatggaca cgttcaccca ccgcatcgac tccaccgagg tcactetacca gccgcgccgc 120
 aagcgggcca agctcatcgg caagtacctg atggggggacc tgctggggga aggctcttac 180
 ggcaaggtga aggaggtgct ggactcggag acgctgtgca ggagggccgt caagatcctc 240
 aagaagaaga agttgcgaag gatccccaac ggggaggcca acgtgaagaa ggaaattcaa 300
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 gacagcgtgc cggagaagcg tttcccagtg tgccaggccc acgggtactt ctgtcagctg 480
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 aacctgctgc tcaccaccgg tggcaccctc aaaatctccg acctgggctg gcccgaggca 600
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 gctgggggtca cctctacaa catcaccacg ggtctgtacc ccttcgaagg ggacaacatc 780
 tacaagttgt ttgagaacat cgggaagggg agctacgcca tcccgggcca ctgtggcccc 840
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 cggcagatcc ggcagcacag ctggttccgg aagaaacatc ctccggctga agcaccagtg 960
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 agcaccaaatt ccagggcgga gggccggggc cccaacctg cccgcaaggc ctgctccgcc 1260
 agcagcaaga tccgcccggc gtcggcctgc aagcagcagt ga 1302

<210> 126
 <211> 433
 <212> PRT
 <213> Homo Sapiens

<400> 126
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 20 25 30
 Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys
 35 40 45
 Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys
 50 55 60
 Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu
 65 70 75 80

Lys Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys
 85 90 95
 Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
 100 105 110
 Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val
 115 120 125
 Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro
 130 135 140
 Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Tyr Phe Cys Gln Leu
 145 150 155 160
 Ile Asp Gly Leu Glu Tyr Leu His Ser Gln Gly Ile Val His Lys Asp
 165 170 175
 Ile Lys Pro Gly Asn Leu Leu Leu Thr Thr Gly Gly Thr Leu Lys Ile
 180 185 190
 Ser Asp Leu Gly Val Ala Glu Ala Leu His Pro Phe Ala Ala Asp Asp
 195 200 205
 Thr Cys Arg Thr Ser Gln Gly Ser Pro Ala Phe Gln Pro Pro Glu Ile
 210 215 220
 Ala Asn Gly Leu Asp Thr Phe Ser Gly Phe Lys Val Asp Ile Trp Ser
 225 230 235 240
 Ala Gly Val Thr Leu Tyr Asn Ile Thr Thr Gly Leu Tyr Pro Phe Glu
 245 250 255
 Gly Asp Asn Ile Tyr Lys Leu Phe Glu Asn Ile Gly Lys Gly Ser Tyr
 260 265 270
 Ala Ile Pro Gly Asp Cys Gly Pro Pro Leu Ser Asp Leu Leu Lys Gly
 275 280 285
 Met Leu Glu Tyr Glu Pro Ala Lys Arg Phe Ser Ile Arg Gln Ile Arg
 290 295 300
 Gln His Ser Trp Phe Arg Lys Lys His Pro Pro Ala Glu Ala Pro Val
 305 310 315 320
 Pro Ile Pro Pro Ser Pro Asp Thr Lys Asp Arg Trp Arg Ser Met Thr
 325 330 335
 Val Val Pro Tyr Leu Glu Asp Leu His Gly Ala Asp Glu Asp Glu Asp
 340 345 350
 Leu Phe Asp Ile Glu Asp Asp Ile Ile Tyr Thr Gln Asp Phe Thr Val
 355 360 365
 Pro Gly Gln Val Pro Glu Glu Glu Ala Ser His Asn Gly Gln Arg Arg
 370 375 380
 Gly Leu Pro Lys Ala Val Cys Met Asn Gly Thr Glu Ala Ala Gln Leu
 385 390 395 400
 Ser Thr Lys Ser Arg Ala Glu Gly Arg Ala Pro Asn Pro Ala Arg Lys
 405 410 415
 Ala Cys Ser Ala Ser Ser Lys Ile Arg Arg Leu Ser Ala Cys Lys Gln
 420 425 430
 Gln

<210> 127

<211> 1488

<212> DNA

<213> Homo Sapiens

<400> 127

gaggggagg ggggtgccgg caagatggct ggcggcgaga agatgacgtt tcccgagaaa
 ccaagccaca aaaagtacag ggccggcctg aagaaggaga aacgaaagaa acgtcggcag

60
120

```

gaacttgctc gactgagaga ctcaggactc tcacagaagg aggaagagga ggacactttt 180
attgaagaac aacaactaga agaagagaag ctattggaaa gagagaggca aagattacat 240
gaggagtggg tgctaagaga gcagaaggca caagaagaat tcagaataaa gaagggaaaag 300
gaagaggcgg ctaaaaaacg gcaagaagaa caagagagaa agttaaagga acaatgggaa 360
gaacagcaga ggaaagagag agaagaggag gagcagaaac gacaggagaa gaaagaaaaa 420
gaggaagctt tgcagaagat gctggatcag gctgaaaatg agttggaaaaa tggtaggaca 480
tggaacaaac cagaaccacc cgtggatttc agagtaatgg agaaggatcg agctaattgt 540
cccttctaca gtaaaacagg agcttgacga tttggagata gatgttcacg taaacataat 600
ttcccaacat ccagtcctac ccttcttatt aagagcatgt ttacgacgtt tggaatggag 660
cagtgcagga gggatgacta tgaccctgac gcaagcctgg agtacagcga ggaagaaacc 720
taccaacagt tcctagactt ctatgaggat gtgttgcccg agttcaagaa cgtggggaaa 780
gtgattcagt tcaaggctcag ctgcaatttg gaacctcacc tgagggggcaa tgtatatgtt 840
cagtaccagt cggaagaaga atgccaagca gccctttctc tgtttaacgg acgatggtat 900
gcaggacgac agctgcagtg tgaattctgc cccgtgaccc ggtgggaaaat ggcgatttgt 960
ggtttatttg aaatacaaca atgtccaaga ggaaagcact gcaactttct tcatgtgttc 1020
agaaatccca acaatgaatt ctgggaagct aatagagaca tctacttgct tccagatcgg 1080
actggctcct cctttgggaa gaactccgaa aggagggaga ggatgggcca ccacgacgac 1140
tactacagca ggctgcgggg aaggagaaac cctagtcctc accactccta caaaagaaat 1200
ggggaatccg agagggaaaag tagtcgtcac agggggaaga aatctcacia acgcacatca 1260
aagagtcggg agaggcaciaa ttcacgaagc agaggaagaa atagggaccg cagcagggac 1320
cgcagccggg gccggggcgag ccggagccgg agccggagcc ggagccgcag gagccgccgc 1380
agccggagcc aaagtctctc taggtccga agtcgtggca ggaggaggtc gggtaataga 1440
gacagaactg ttcagagtcc caaatccaaa taaactagtt ttgttctt 1488

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<210> 128

<211> 482

<212> PRT

<213> Homo Sapiens

<400> 128

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Met Ala Ala Pro Glu Lys Met Thr Phe Pro Glu Lys Pro Ser His Lys
1          5          10          15
Lys Tyr Arg Ala Ala Leu Lys Lys Glu Lys Arg Lys Lys Arg Arg Gln
20          25          30
Glu Leu Ala Arg Leu Arg Asp Ser Gly Leu Ser Gln Lys Glu Glu Glu
35          40          45
Glu Asp Thr Phe Ile Glu Glu Gln Gln Leu Glu Glu Glu Lys Leu Leu
50          55          60
Glu Arg Glu Arg Gln Arg Leu His Glu Glu Trp Leu Leu Arg Glu Gln
65          70          75          80
Lys Ala Gln Glu Glu Phe Arg Ile Lys Lys Glu Lys Glu Glu Ala Ala
85          90          95
Lys Lys Arg Gln Glu Glu Gln Glu Arg Lys Leu Lys Glu Gln Trp Glu
100          105          110
Glu Gln Gln Arg Lys Glu Arg Glu Glu Glu Glu Gln Lys Arg Gln Glu
115          120          125
Lys Lys Glu Lys Glu Glu Ala Leu Gln Lys Met Leu Asp Gln Ala Glu
130          135          140
Asn Glu Leu Glu Asn Gly Thr Thr Trp Gln Asn Pro Glu Pro Pro Val
145          150          155          160
Asp Phe Arg Val Met Glu Lys Asp Arg Ala Asn Cys Pro Phe Tyr Ser
165          170          175
Lys Thr Gly Ala Cys Arg Phe Gly Asp Arg Cys Ser Arg Lys His Asn
180          185          190
Phe Pro Thr Ser Ser Pro Thr Leu Leu Ile Lys Ser Met Phe Thr Thr

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195	200	205
Phe Gly Met Glu Gln Cys Arg Arg Asp Asp Tyr Asp Pro Asp Ala Ser		
210	215	220
Leu Glu Tyr Ser Glu Glu Thr Tyr Gln Gln Phe Leu Asp Phe Tyr		
225	230	235
Glu Asp Val Leu Pro Glu Phe Lys Asn Val Gly Lys Val Ile Gln Phe		240
	245	250
Lys Val Ser Cys Asn Leu Glu Pro His Leu Arg Gly Asn Val Tyr Val		255
	260	265
Gln Tyr Gln Ser Glu Glu Glu Cys Gln Ala Ala Leu Ser Leu Phe Asn		270
	275	280
Gly Arg Trp Tyr Ala Gly Arg Gln Leu Gln Cys Glu Phe Cys Pro Val		285
	290	295
Thr Arg Trp Lys Met Ala Ile Cys Gly Leu Phe Glu Ile Gln Gln Cys		300
305	310	315
Pro Arg Gly Lys His Cys Asn Phe Leu His Val Phe Arg Asn Pro Asn		320
	325	330
Asn Glu Phe Trp Glu Ala Asn Arg Asp Ile Tyr Leu Ser Pro Asp Arg		335
	340	345
Thr Gly Ser Ser Phe Gly Lys Asn Ser Glu Arg Arg Glu Arg Met Gly		350
	355	360
His His Asp Asp Tyr Tyr Ser Arg Leu Arg Gly Arg Arg Asn Pro Ser		365
	370	375
Pro Asp His Ser Tyr Lys Arg Asn Gly Glu Ser Glu Arg Lys Ser Ser		380
385	390	395
Arg His Arg Gly Lys Lys Ser His Lys Arg Thr Ser Lys Ser Arg Glu		400
	405	410
Arg His Asn Ser Arg Ser Arg Gly Arg Asn Arg Asp Arg Ser Arg Asp		415
	420	425
Arg Ser Arg Gly Arg Gly Ser Arg Ser Arg Ser Arg Ser Arg Ser Arg		430
	435	440
Arg Ser Arg Arg Ser Arg Ser Gln Ser Ser Ser Arg Ser Arg Ser Arg		445
	450	455
Gly Arg Arg Arg Ser Gly Asn Arg Asp Arg Thr Val Gln Ser Pro Lys		460
465	470	475
Ser Lys		480

<210> 129
 <211> 1663
 <212> DNA
 <213> Homo Sapiens

<400> 129

aggccctgag	ccaactccgg	gtgctctgct	gtgagtggct	gaggcccgag	atccacacca	60
aggagcagat	cctggagcta	ctggtgctgg	agcagttcct	gaccatcctg	ccccaggagc	120
tccaggcctg	ggtgcaggag	cattgcccg	agagcgctga	agaggctgtc	actctcctcg	180
aagatctgga	gcgggaactg	gatgagccag	gacaccaggt	ctcaactcct	ccaaacgaac	240
agaaaccggt	gtgggagaag	atatcctcct	caggaactgc	aaaggaatcc	ccgagcagca	300
tgcagccaca	gcccttgagg	accagtcaca	aatacagatc	ttggggggccc	ctgtacatcc	360
aagagtctgg	tgaggagcag	gagttcgctc	aagatccaag	aaaggtccga	gattgcagat	420
tgagtaccca	gcacgaggaa	tcagcagatg	agcagaaagg	ttctgaagca	gagggggtca	480
aaggggatat	aatttctgtg	attatcgcca	ataaacctga	ggccagctta	gagaggcagt	540
gcgtaaacct	tgaaaatgaa	aaaggaacaa	aaacccctct	tcaagaggca	ggctccaaga	600
aaggtagaga	atcagttcct	actaaaccta	ccccagaga	gagacgttat	atatgtgctg	660

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<210> 130
<211> 412
<212> PRT
<213> Homo Sapiens
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-97-

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                245                250                255
Ser Asn Leu Thr Leu His Tyr Arg Thr His Leu Val Asp Arg Pro Tyr
                260                265                270
Asp Cys Lys Cys Gly Lys Ala Phe Gly Gln Ser Ser Asp Leu Leu Lys
                275                280                285
His Gln Arg Met His Thr Glu Glu Ala Pro Tyr Gln Cys Lys Asp Cys
                290                295                300
Gly Lys Ala Phe Ser Gly Lys Gly Ser Leu Ile Arg His Tyr Arg Ile
305                310                315                320
His Thr Gly Glu Lys Pro Tyr Gln Cys Asn Glu Cys Gly Lys Ser Phe
                325                330                335
Ser Gln His Ala Gly Leu Ser Ser His Gln Arg Leu His Thr Gly Glu
                340                345                350
Lys Pro Tyr Lys Cys Lys Glu Cys Gly Lys Ala Phe Asn His Ser Ser
                355                360                365
Asn Phe Asn Lys His His Arg Ile His Thr Gly Glu Lys Pro Tyr Trp
                370                375                380
Cys His His Cys Gly Lys Thr Phe Cys Ser Lys Ser Asn Leu Ser Lys
385                390                395                400
His Gln Arg Val His Thr Gly Glu Gly Glu Ala Pro
                405                410

```

<210> 131
 <211> 724
 <212> DNA
 <213> Homo Sapiens

```

<400> 131
ggagaatgaa aagcagaaag tggcagagct gtattctatc cataactctg gagacaaatc      60
tgatattcag gacctcctgg agagtgtcag gctggacaaa gaaaaagcag agactttggc      120
tagtagcttg caggaagatc tggctcatac ccgaaatgat gccaatcgat tacaggatgc      180
cattgctaag gtagaggatg aataccgagc cttccaagaa gaagctaaga aacaaattga      240
agatttgaat atgacgttag aaaaatttag atcagacctg gatgaaaaag aaacagaaag      300
gagtgcacat aaagaaacca tctttgaact tgaagatgaa gtagaacaac atcgtgctgt      360
gaaacttcat gacaacctca ttatttctga tctagagaat acagttaaaa aactccagga      420
ccaaaagcac gacatggaaa gagaaataaa gacactccac agaagacttc gggaagaatc      480
tgcggaatgg cggcagtttc aggctgatct ccagactgca gtagtcattg caaatgacat      540
taaacttgaa gcccaagagg agattggtga tctaaagcgc cgggtacatg aggctcaaga      600
aaaaaatgag aaactcacia aagaattgga ggaaataagt ccgccaagcc agaangangac      660
gangccggtg ttccantaca tgnatgcccg tgagagagaa tttggcaggc ctttaaggcag      720
ggaa

```

<210> 132
 <211> 218
 <212> PRT
 <213> Homo Sapiens

```

<400> 132
Glu Asn Glu Lys Gln Lys Val Ala Glu Leu Tyr Ser Ile His Asn Ser
1                5                10                15
Gly Asp Lys Ser Asp Ile Gln Asp Leu Leu Glu Ser Val Arg Leu Asp
                20                25                30
Lys Glu Lys Ala Glu Thr Leu Ala Ser Ser Leu Gln Glu Asp Leu Ala
                35                40                45
His Thr Arg Asn Asp Ala Asn Arg Leu Gln Asp Ala Ile Ala Lys Val

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      50              55              60
Glu Asp Glu Tyr Arg Ala Phe Gln Glu Glu Ala Lys Lys Gln Ile Glu
65              70              75              80
Asp Leu Asn Met Thr Leu Glu Lys Leu Arg Ser Asp Leu Asp Glu Lys
      85              90              95
Glu Thr Glu Arg Ser Asp Met Lys Glu Thr Ile Phe Glu Leu Glu Asp
      100             105             110
Glu Val Glu Gln His Arg Ala Val Lys Leu His Asp Asn Leu Ile Ile
      115             120             125
Ser Asp Leu Glu Asn Thr Val Lys Lys Leu Gln Asp Gln Lys His Asp
      130             135             140
Met Glu Arg Glu Ile Lys Thr Leu His Arg Arg Leu Arg Glu Glu Ser
145             150             155             160
Ala Glu Trp Arg Gln Phe Gln Ala Asp Leu Gln Thr Ala Val Val Ile
      165             170             175
Ala Asn Asp Ile Lys Ser Glu Ala Gln Glu Glu Ile Gly Asp Leu Lys
      180             185             190
Arg Arg Val His Glu Ala Gln Glu Lys Asn Glu Lys Leu Thr Lys Glu
      195             200             205
Leu Glu Glu Ile Ser Pro Pro Ser Gln Lys
      210             215

```

<210> 133
 <211> 719
 <212> DNA
 <213> Homo Sapiens

```

<400> 133
gagaactaca gagctgggtg cggggccaac ggccagaaag tggcgaggag gcagtgcgc      60
tggtggaggg tttgcagaaa caaccagga gaccaaggcg gtgactgtcc atgttcacgg      120
ccaggaagtc ctgtcagagg agacggtgca tttaggagcg gagcctgagt cacctaata      180
gctgcaggat cctgtgcaaa gctcgacccc cgagcagtc cctgaggaaa ccacacagag      240
cccagatctg ggggcaccgg cagagcagcg tccacaccag gaagaggagc tccagaccct      300
gcaggagagc gaggtcccag tgcccagga cccagacott cctgcagaga ggagctctgg      360
agactcagag atggttgctc ttcttactgc tctgtcacag ggactggtaa cgttcaagga      420
tgtggccgta tgcttttccc aggaccagtg gagtgatctg gacccaacac agaaagagtt      480
ctatggagaa tatgtcttgg aagaagactg tggaattggt gtctctctgt catttccaat      540
ccccagacct gatgagatct cccagggttag agaggaagag cccttgggtc ccagatatcc      600
aagagcctna ggagactcaa gagccagaaa tcctgagttt tacctacaca ggagatagga      660
gtnaagatga aggaaaatgt ctggagccag gaagaatctg agtttgagg atataccca      719

```

<210> 134
 <211> 217
 <212> PRT
 <213> Homo Sapiens

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<400> 134
Arg Thr Thr Glu Leu Gly Ala Gly Pro Thr Ala Arg Lys Trp Arg Gly
  1              5              10              15
Gly Ser Asp Ala Gly Gly Gly Phe Ala Glu Thr Thr Gln Glu Thr Lys
      20              25              30
Ala Val Thr Val His Val His Gly Gln Glu Val Leu Ser Glu Glu Thr
      35              40              45
Val His Leu Gly Ala Glu Pro Glu Ser Pro Asn Glu Leu Gln Asp Pro
      50              55              60

```

Val Gln Ser Ser Thr Pro Glu Gln Ser Pro Glu Glu Thr Thr Gln Ser
 65 70 75 80
 Pro Asp Leu Gly Ala Pro Ala Glu Gln Arg Pro His Gln Glu Glu Glu
 85 90 95
 Leu Gln Thr Leu Gln Glu Ser Glu Val Pro Val Pro Glu Asp Pro Asp
 100 105 110
 Leu Pro Ala Glu Arg Ser Ser Gly Asp Ser Glu Met Val Ala Leu Leu
 115 120 125
 Thr Ala Leu Ser Gln Gly Leu Val Thr Phe Lys Asp Val Ala Val Cys
 130 135 140
 Phe Ser Gln Asp Gln Trp Ser Asp Leu Asp Pro Thr Gln Lys Glu Phe
 145 150 155 160
 Tyr Gly Glu Tyr Val Leu Glu Glu Asp Cys Gly Ile Val Val Ser Leu
 165 170 175
 Ser Phe Pro Ile Pro Arg Pro Asp Glu Ile Ser Gln Val Arg Glu Glu
 180 185 190
 Glu Pro Leu Gly Pro Arg Tyr Pro Arg Ala Gly Asp Ser Arg Ala Arg
 195 200 205
 Asn Pro Glu Phe Tyr Leu His Arg Arg
 210 215

<210> 135
 <211> 1027
 <212> DNA
 <213> Homo Sapiens

<400> 135
 gcgagggcg gggcgaggcg gtgctcatgg aggaggacct gatccagcag agcctggacg 60
 actacgacgc cggcaggtac agcccgcggc tgctcacggc gcacgagctg cacttggacg 120
 cgcacgtgct ggaaccggat gaggacctgc agcgctgca gctctcgcg cagcagctcc 180
 aggtcacggg agacgccagc gagagcgccg aggacatctt ctccggcg gccaaggagg 240
 gcatgggcca ggacgaggcg cagttcagcg tggagatgcc actcaccggc aaggcctacc 300
 tgtggggcga caagtaccgg ccacgcaagc cgcgcttctt caaccgctg cacacgggct 360
 tcgagtggaa caagtacaac cagacgcact acgactttga caaccacccg cccaagatcg 420
 tgcaggggata caagttaaac atcttctacc ccgacctcat cgacaagcgc tccacgcccg 480
 agtacttctt ggaggcctgc gccgacaaca aggatttgcg catcctgcgc ttcacgcggg 540
 gccgcctaag aggacatcgc tttcaagatc gtcaaccgcg agtgggaata ctngcacgcg 600
 cagggcttcc gctgccagtt tgccaacggc attttccanc tgncttttca cttcaagcgc 660
 tncgctatc ggcggtgacg gccctgggga acggcaggcc aggagggccg agggccacac 720
 ggggtgccaca gccaggtcg gagtggccca gccggcaggc ttgtttttca gcatccgacg 780
 ggaacatctc caacagaagc aaaacggaaa gtgcctcccg gacccccaga gggccacca 840
 acctcaccag tcaccagccc cagaccacc acagccctc ccagacacc cgctcatct 900
 ggaaatagtt ccgtttgttt ctctaaaaag acttgtaggt gggaaaaaaa atcttttgg 960
 ctcatggaat tggcctattg gcaagatcgc atgttttttt aataaacggt gtattttaga 1020
 ataaaaa 1027

<210> 136
 <211> 299
 <212> PRT
 <213> Homo Sapiens

<400> 136
 Glu Gly Glu Gly Glu Ala Val Leu Met Glu Glu Asp Leu Ile Gln Gln
 1 5 10 15
 Ser Leu Asp Asp Tyr Asp Ala Gly Arg Tyr Ser Pro Arg Leu Leu Thr

20	25	30
Ala His Glu Leu Pro Leu Asp	Ala His Val Leu Glu Pro Asp Glu Asp	
35	40	45
Leu Gln Arg Leu Gln Leu Ser Arg Gln Gln Leu Gln Val Thr Gly Asp		
50	55	60
Ala Ser Glu Ser Ala Glu Asp Ile Phe Phe Arg Arg Ala Lys Glu Gly		
65	70	75
Met Gly Gln Asp Glu Ala Gln Phe Ser Val Glu Met Pro Leu Thr Gly		
85	90	95
Lys Ala Tyr Leu Trp Ala Asp Lys Tyr Arg Pro Arg Lys Pro Arg Phe		
100	105	110
Phe Asn Arg Val His Thr Gly Phe Glu Trp Asn Lys Tyr Asn Gln Thr		
115	120	125
His Tyr Asp Phe Asp Asn Pro Pro Pro Lys Ile Val Gln Gly Tyr Lys		
130	135	140
Phe Asn Ile Phe Tyr Pro Asp Leu Ile Asp Lys Arg Ser Thr Pro Glu		
145	150	155
Tyr Phe Leu Glu Ala Cys Ala Asp Asn Lys Asp Phe Ala Ile Leu Arg		
165	170	175
Phe Thr Arg Gly Arg Leu Arg Gly His Arg Phe Gln Asp Arg Gln Pro		
180	185	190
Arg Val Gly Ile Leu Ala Pro Pro Arg Leu Pro Leu Pro Val Cys Gln		
195	200	205
Arg His Phe Pro Leu Ser Leu Gln Ala Leu Pro Leu Ser Ala Val Thr		
210	215	220
Ala Leu Gly Asn Gly Arg Pro Gly Gly Pro Arg Ala Thr Arg Val Pro		
225	230	235
Gln Pro Arg Ser Glu Trp Pro Ser Arg Gln Ala Cys Phe Ser Ala Ser		
245	250	255
Asp Gly Asn Ile Ser Asn Arg Ser Lys Thr Glu Ser Ala Ser Arg Thr		
260	265	270
Pro Arg Gly Pro Pro Asn Leu Thr Ser His Gln Pro Gln Thr Thr His		
275	280	285
Ser Pro Ser Gln Thr Pro Arg Leu Ile Trp Lys		
290	295	

<210> 137

<211> 766

<212> DNA

<213> Homo Sapiens

<400> 137

caaagggttta	cacagtaa	aatgtgaatg	tgatcaccaa	aatacgcaca	gaacatctga	60
ccgaggagga	aaaaaagaga	tataaaagaca	ggaacccgct	ggaatctttg	ctgggaactg	120
tggaaacacca	atttggtgca	caaggggacc	tcaccacgga	atgtgctact	gcaaacaacc	180
ccacagccat	cacgcctgat	gagtacttca	atgaagagtt	tgatctgaaa	gacagggaca	240
ttggaaggcc	gaaagagctg	acgattagaa	cacagaagtt	taaagcaatg	ttgtggatgt	300
gtgaagagtt	tccccctctct	ctgggtggagc	aggtcattcc	catcattgac	ctaattggctc	360
gaacgagtgc	tcatttttgca	agactgagag	atttcatcaa	attggaattc	ccacctggat	420
ttcctgtcaa	aatagcttcc	cacatcacaa	actttgaggt	tgatcaatct	gtgtttgaaa	480
ttccccgaatc	ttactatggt	caagacaatg	gcagaaatgt	gcatttgcaa	gatgaagatt	540
acgagataat	gcagtttgcc	atccagcaaa	gtctgctgga	gtccagcagg	agccaggaac	600
tttcaggacc	agcttcgaat	ggaggggatca	gccagacaaa	caactatgac	gcccagtatg	660
agagggccat	ncaggagagc	cttctaccag	cacagaaagc	ctgtgcccc	agcgcccctg	720
agcgagacna	gccgttttga	taatggactt	gcagctaagg	catgga		766

<210> 138
 <211> 243
 <212> PRT
 <213> Homo Sapiens

<400> 138
 Lys Val Tyr Thr Val Asn Asn Val Asn Val Ile Thr Lys Ile Arg Thr
 1 5 10 15
 Glu His Leu Thr Glu Glu Glu Lys Lys Arg Tyr Lys Asp Arg Asn Pro
 20 25 30
 Leu Glu Ser Leu Leu Gly Thr Val Glu His Gln Phe Gly Ala Gln Gly
 35 40 45
 Asp Leu Thr Thr Glu Cys Ala Thr Ala Asn Asn Pro Thr Ala Ile Thr
 50 55 60
 Pro Asp Glu Tyr Phe Asn Glu Glu Phe Asp Leu Lys Asp Arg Asp Ile
 65 70 75 80
 Gly Arg Pro Lys Glu Leu Thr Ile Arg Thr Gln Lys Phe Lys Ala Met
 85 90 95
 Leu Trp Met Cys Glu Glu Phe Pro Leu Ser Leu Val Glu Gln Val Ile
 100 105 110
 Pro Ile Ile Asp Leu Met Ala Arg Thr Ser Ala His Phe Ala Arg Leu
 115 120 125
 Arg Asp Phe Ile Lys Leu Glu Phe Pro Pro Gly Phe Pro Val Lys Ile
 130 135 140
 Ala Ser His Ile Thr Asn Phe Glu Val Asp Gln Ser Val Phe Glu Ile
 145 150 155 160
 Pro Glu Ser Tyr Tyr Val Gln Asp Asn Gly Arg Asn Val His Leu Gln
 165 170 175
 Asp Glu Asp Tyr Glu Ile Met Gln Phe Ala Ile Gln Gln Ser Leu Leu
 180 185 190
 Glu Ser Ser Arg Ser Gln Glu Leu Ser Gly Pro Ala Ser Asn Gly Gly
 195 200 205
 Ile Ser Gln Thr Asn Thr Tyr Asp Ala Gln Tyr Glu Arg Ala Gln Glu
 210 215 220
 Ser Leu Leu Pro Ala Gln Lys Ala Cys Ala Pro Ser Ala Pro Glu Arg
 225 230 235 240
 Asp Pro Phe

<210> 139
 <211> 3060
 <212> DNA
 <213> Homo Sapiens

<400> 139
 ccggggcggga gtgcggcgag agccggctgg ctgagcttag cgtccgagga ggcggcggcg 60
 gcggcgggcg cagcggcggc ggcggggctg tggggcggtg cggaagcgag aggcgaggag 120
 cgcgcggggc gtggccagag tctggcgggc gcctggcgga gcggagagca gcgcccgcgc 180
 ctgcgcgtgc ggaggagccc cgcacacaat agcggcgcgc gcagcccgcg cccttcccc 240
 cggcgcgccc cgccccgcgc gccgagcgcc ccgctccgcc tcacctgcca ccaggagtg 300
 ggcgggcatt gttcgcgcgc gccgcgcgc cgcggggcca tgggggccc cggcgcgccg 360
 gggccggggc tggcgaggcc gccgcgcgc cgtgagacg ggccccgcgc gcagcccggc 420
 ggcgaggtta aggcgggccc cgccatggtg gacccggtg gcttcgcgga ggcgaggag 480
 gcgcagttcc cggactcaga gccccgcgc atggagctgc gctcagtgga cgacatcgag 540
 caggagctgg agcgtgcaa ggcctccatt cggcgccctg agcaggaggt gaaccaggag 600

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cgcttccgca tgatctacct gcagacgttg ctggccaagg aaaagaagag ctatgaccgg 660
cagcgatggg gcttccggcg cgcggcgag gccccgagc ggcctccga gccccgagcg 720
tccgcgtcgc gccccgagcc agcggccgccc cgcggagccg acccgccgcc cgccgaggag 780
cccaggcccc ggccccgacg cgagggttct ccgggtaagg ccaggccccg gaccgccccg 840
aggccccggg cagccgcgtc gggggaacgg gacgaccggg gacccccgc cagcgtggcg 900
gcgctcaggt ccaacttcga gcggatccgc aagggccatg gccagccccg ggcgagaccg 960
gagaagccct tctacgtgaa cgtcaggttt caccacgagc gcggcctggt gaaggtcaac 1020
gacaaagagg tgtcggaccg catcagctcc ctgggcagcc aggccatgca gatggagcgc 1080
aaaaagtccc agcacggcgc gggctcgagc gtgggggatg catccaggcc cccttaccgg 1140
ggacgctcct cggagagcag ctgcggcgct gacggcgact acgaggagc cgagttgaac 1200
ccccgcttcc tgaaggacaa cctgatcgac gccaatggcg gtagcaggcc cccttggccg 1260
cccctggagt accagcccta ccagagcacc tacgtcgggg gcatgatgga aggggagggc 1320
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cgcaggtcct actccccccg gagttttgag gattgcggag gcggctatac cccggactgc 1440
agctccaatg agaacctcac ctccagcgag gaggacttct cctctggcca gtccagccgc 1500
gtgtcccca gccccaccac ctaccgcatg ttccgggaca aaagccgctc tccctcgag 1560
aactcgcaac agtccctcga cagcagcagt cccccacgc cgcagtgcc taagcggcac 1620
cggcactgcc cggttgtcgt gtccgaggcc accatcgtgg gcgtccgcaa gaccgggag 1680
atctggccca acgatggcga gggcgcttc catggagacg cagatggctc gttcggaaca 1740
ccacctggat acggctgcgc tgcagaccgg gcagaggagc agcgccggca ccaagatggg 1800
ctgcccatac ttgatgactc gccctcctca tcgccccacc tcagcagcaa gggcaggggc 1860
agccgggatg cgctggtctc gggagccctg gagtccacta aagcgagtga gctggacttg 1920
gaaaagggtc tggagatgag aaaatgggtc ctgtcgggaa tcctggctag cgaggagact 1980
tacctgagcc acctggaggc actgctgctg cccatgaagc ctttgaaagc cgctgccacc 2040
acctctcagc cgggtgctgac gagtacgagc atcgagacca tcttcttcaa agtgctgag 2100
ctctacgaga tccacaagga gttctatgat gggctcttcc cccgcgtgca gcagtggagc 2160
caccagcagc ggggtggcga cctcttccag aagctggcca gccagctggg tgtgtaccgg 2220
gccttcgtgg acaactacgg agttgccatg gaaatggctg agaagtgtg tcaggccaat 2280
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agcacgctgg tcttccatga cttgctgaag cacactctg ccagccacc tgaccacccc 2460
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acaccccgac ggcagtcctat gacggtgaag aaggagagc accggcagct gctgaaggac 2580
agcttcatgg tggagctggg ggagggggcc cgcaagctgc gccacgtctt cctgttcacc 2640
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tgcaaatggt acattccgct cacggatctc agcttccaga tgggtggatga actggaggca 2760
gtgcccacaa tccccctggg gcccgatgag gagctggacg ctttgaagat caagatctcc 2820
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aggctgaaga agaagctgtc ggagcaggag tcaactgctg tgcttatgtc tcccagcatg 2940
gccttcaggg tgcacagccg caacggcaag agttacacgt tctgatctc ctctgactat 3000
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<210> 140

<211> 872

<212> PRT

<213> Homo Sapiens

<400> 140

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Met Val Asp Pro Val Gly Phe Ala Glu Ala Trp Lys Ala Gln Phe Pro
 1             5             10            15
Asp Ser Glu Pro Pro Arg Met Glu Leu Arg Ser Val Gly Asp Ile Glu
      20             25            30
Gln Glu Leu Glu Arg Cys Lys Ala Ser Ile Arg Arg Leu Glu Gln Glu
      35             40            45
Val Asn Gln Glu Arg Phe Arg Met Ile Tyr Leu Gln Thr Leu Leu Ala

```


50						55					60				
Lys	Glu	Lys	Lys	Ser	Tyr	Asp	Arg	Gln	Arg	Trp	Gly	Phe	Arg	Arg	Ala
65					70					75					80
Ala	Gln	Ala	Pro	Asp	Gly	Ala	Ser	Glu	Pro	Arg	Ala	Ser	Ala	Ser	Arg
				85						90					95
Pro	Gln	Pro	Ala	Pro	Ala	Asp	Gly	Ala	Asp	Pro	Pro	Pro	Ala	Glu	Glu
			100						105				110		
Pro	Glu	Ala	Arg	Pro	Asp	Gly	Glu	Gly	Ser	Pro	Gly	Lys	Ala	Arg	Pro
		115						120				125			
Gly	Thr	Ala	Arg	Arg	Pro	Gly	Ala	Ala	Ala	Ser	Gly	Glu	Arg	Asp	Asp
	130					135					140				
Arg	Gly	Pro	Pro	Ala	Ser	Val	Ala	Ala	Leu	Arg	Ser	Asn	Phe	Glu	Arg
145					150					155					160
Ile	Arg	Lys	Gly	His	Gly	Gln	Pro	Gly	Ala	Asp	Ala	Glu	Lys	Pro	Phe
				165						170					175
Tyr	Val	Asn	Val	Glu	Phe	His	His	Glu	Arg	Gly	Leu	Val	Lys	Val	Asn
		180						185					190		
Asp	Lys	Glu	Val	Ser	Asp	Arg	Ile	Ser	Ser	Leu	Gly	Ser	Gln	Ala	Met
	195						200					205			
Gln	Met	Glu	Arg	Lys	Lys	Ser	Gln	His	Gly	Ala	Gly	Ser	Ser	Val	Gly
	210					215					220				
Asp	Ala	Ser	Arg	Pro	Pro	Tyr	Arg	Gly	Arg	Ser	Ser	Glu	Ser	Ser	Cys
225					230					235					240
Gly	Val	Asp	Gly	Asp	Tyr	Glu	Asp	Ala	Glu	Leu	Asn	Pro	Arg	Phe	Leu
				245					250					255	
Lys	Asp	Asn	Leu	Ile	Asp	Ala	Asn	Gly	Gly	Ser	Arg	Pro	Pro	Trp	Pro
		260						265					270		
Pro	Leu	Glu	Tyr	Gln	Pro	Tyr	Gln	Ser	Ile	Tyr	Val	Gly	Gly	Met	Met
	275						280					285			
Glu	Gly	Glu	Gly	Lys	Gly	Pro	Leu	Leu	Arg	Ser	Gln	Ser	Thr	Ser	Glu
	290					295					300				
Gln	Glu	Lys	Arg	Leu	Thr	Trp	Pro	Arg	Arg	Ser	Tyr	Ser	Pro	Arg	Ser
305					310					315					320
Phe	Glu	Asp	Cys	Gly	Gly	Gly	Tyr	Thr	Pro	Asp	Cys	Ser	Ser	Asn	Glu
				325					330					335	
Asn	Leu	Thr	Ser	Ser	Glu	Glu	Asp	Phe	Ser	Ser	Gly	Gln	Ser	Ser	Arg
		340						345					350		
Val	Ser	Pro	Ser	Pro	Thr	Thr	Tyr	Arg	Met	Phe	Arg	Asp	Lys	Ser	Arg
	355						360					365			
Ser	Pro	Ser	Gln	Asn	Ser	Gln	Gln	Ser	Phe	Asp	Ser	Ser	Ser	Pro	Pro
	370					375				380					
Thr	Pro	Gln	Cys	His	Lys	Arg	His	Arg	His	Cys	Pro	Val	Val	Val	Ser
385					390					395					400
Glu	Ala	Thr	Ile	Val	Gly	Val	Arg	Lys	Thr	Gly	Gln	Ile	Trp	Pro	Asn
				405					410					415	
Asp	Gly	Glu	Gly	Ala	Phe	His	Gly	Asp	Ala	Asp	Gly	Ser	Phe	Gly	Thr
			420					425					430		
Pro	Pro	Gly	Tyr	Gly	Cys	Ala	Ala	Asp	Arg	Ala	Glu	Glu	Gln	Arg	Arg
	435						440					445			
His	Gln	Asp	Gly	Leu	Pro	Tyr	Ile	Asp	Asp	Ser	Pro	Ser	Ser	Ser	Pro
	450					455				460					
His	Leu	Ser	Ser	Lys	Gly	Arg	Gly	Ser	Arg	Asp	Ala	Leu	Val	Ser	Gly
465					470					475					480
Ala	Leu	Glu	Ser	Thr	Lys	Ala	Ser	Glu	Leu	Asp	Leu	Glu	Lys	Gly	Leu
				485					490					495	

Glu Met Arg Lys Trp Val Leu Ser Gly Ile Leu Ala Ser Glu Glu Thr
 500 505 510
 Tyr Leu Ser His Leu Glu Ala Leu Leu Pro Met Lys Pro Leu Lys
 515 520 525
 Ala Ala Ala Thr Thr Ser Gln Pro Val Leu Thr Ser Gln Gln Ile Glu
 530 535 540
 Thr Ile Phe Phe Lys Val Pro Glu Leu Tyr Glu Ile His Lys Glu Phe
 545 550 555 560
 Tyr Asp Gly Leu Phe Pro Arg Val Gln Gln Trp Ser His Gln Gln Arg
 565 570 575
 Val Gly Asp Leu Phe Gln Lys Leu Ala Ser Gln Leu Gly Val Tyr Arg
 580 585 590
 Ala Phe Val Asp Asn Tyr Gly Val Ala Met Glu Met Ala Glu Lys Cys
 595 600 605
 Cys Gln Ala Asn Ala Gln Phe Ala Glu Ile Ser Glu Asn Leu Arg Ala
 610 615 620
 Arg Ser Asn Lys Asp Ala Lys Asp Pro Thr Thr Lys Asn Ser Leu Glu
 625 630 635 640
 Thr Leu Leu Tyr Lys Pro Val Asp Arg Val Thr Arg Ser Thr Leu Val
 645 650 655
 Leu His Asp Leu Leu Lys His Thr Pro Ala Ser His Pro Asp His Pro
 660 665 670
 Leu Leu Gln Asp Ala Leu Arg Ile Ser Gln Asn Phe Leu Ser Ser Ile
 675 680 685
 Asn Glu Glu Ile Thr Pro Arg Arg Gln Ser Met Thr Val Lys Lys Gly
 690 695 700
 Glu His Arg Gln Leu Leu Lys Asp Ser Phe Met Val Glu Leu Val Glu
 705 710 715 720
 Gly Ala Arg Lys Leu Arg His Val Phe Leu Phe Thr Glu Leu Leu Leu
 725 730 735
 Cys Thr Lys Leu Lys Lys Gln Ser Gly Gly Lys Thr Gln Gln Tyr Asp
 740 745 750
 Cys Lys Trp Tyr Ile Pro Leu Thr Asp Leu Ser Phe Gln Met Val Asp
 755 760 765
 Glu Leu Glu Ala Val Pro Asn Ile Pro Leu Val Pro Asp Glu Glu Leu
 770 775 780
 Asp Ala Leu Lys Ile Lys Ile Ser Gln Ile Lys Ser Asp Ile Gln Arg
 785 790 795 800
 Glu Lys Arg Ala Asn Lys Gly Ser Lys Ala Thr Glu Arg Leu Lys Lys
 805 810 815
 Lys Leu Ser Glu Gln Glu Ser Leu Leu Leu Met Ser Pro Ser Met
 820 825 830
 Ala Phe Arg Val His Ser Arg Asn Gly Lys Ser Tyr Thr Phe Leu Ile
 835 840 845
 Ser Ser Asp Tyr Glu Arg Ala Glu Trp Arg Glu Asn Ile Arg Glu Gln
 850 855 860
 Gln Lys Lys Cys Phe Arg Ser Phe
 865 870

<210> 141

<211> 691

<212> DNA

<213> Homo Sapiens

<400> 141

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gacccctcac actcacctag ccaccatgga catcgccatc caccacccct ggatccgccc 60
ccccctcttt cctttccact cccccagccg cctctttgac cagttcttcg gagagcacct 120
gttgaggtct gatcttttcc cgacgtctac ttccctgagt cctttctacc ttcggccacc 180
ctccttcttg cgggcaccca gctggtttga cactggactc tcagagatgc gcctggagaa 240
ggacagggttc tctgtcaacc tggatgtgaa gcacttctcc ccagaggaac tcaaagttaa 300
ggtgttggga gatgtgattg aggtgcatgg aaaacatgaa gagcgccagg atgaacatgg 360
tttcatctcc agggagttcc acaggaaata ccggatccca gctgatgtag accctctcac 420
cattacttca tccctgtcat ctgatggggt cctcactgtg aatggaccaa ggaaacaggt 480
ctctggccct gagcgacca ttcccatcac ccgtgaagag aagcctgctg tcaccgcagc 540
ccccaagaaa tagatgccct ttcttgaatt gcatttttta aaacaagaaa gtttccccac 600
cagtgaatga aagtcttggt actagtgtgt aagcttatta atgctaaggg caggcccaaa 660
ttatcaagct aataaaatat cattcagcaa c 691

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<210> 142

<211> 175

<212> PRT

<213> Homo Sapiens

<400> 142

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Met Asp Ile Ala Ile His His Pro Trp Ile Arg Arg Pro Phe Phe Pro
1      5      10      15
Phe His Ser Pro Ser Arg Leu Phe Asp Gln Phe Phe Gly Glu His Leu
20      25      30
Leu Glu Ser Asp Leu Phe Pro Thr Ser Thr Ser Leu Ser Pro Phe Tyr
35      40      45
Leu Arg Pro Pro Ser Phe Leu Arg Ala Pro Ser Trp Phe Asp Thr Gly
50      55      60
Leu Ser Glu Met Arg Leu Glu Lys Asp Arg Phe Ser Val Asn Leu Asp
65      70      75      80
Val Lys His Phe Ser Pro Glu Glu Leu Lys Val Lys Val Leu Gly Asp
85      90      95
Val Ile Glu Val His Gly Lys His Glu Glu Arg Gln Asp Glu His Gly
100     105     110
Phe Ile Ser Arg Glu Phe His Arg Lys Tyr Arg Ile Pro Ala Asp Val
115     120     125
Asp Pro Leu Thr Ile Thr Ser Ser Leu Ser Ser Asp Gly Val Leu Thr
130     135     140
Val Asn Gly Pro Arg Lys Gln Val Ser Gly Pro Glu Arg Thr Ile Pro
145     150     155     160
Ile Thr Arg Glu Glu Lys Pro Ala Val Thr Ala Ala Pro Lys Lys
165     170     175

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<210> 143

<211> 1300

<212> DNA

<213> Homo Sapiens

<400> 143

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atctgctggg aatttcttgg gttgacagct cttggatccc tattttgaac agtggtagtg 60
tcctggatta cttttcagaa agaagtaatc ctttttatga cagaacatgt aataatgaag 120
tggtcaaaat gcagaggcta acattagaac acttgaatca gatgggttga atcgagtaca 180
tccttttgca tgetcaagag cccattcttt tcatcattcg gaagcaacag cggcagtcctc 240
ctgcccaggt tatcccacta gctgattact atatcattgc tggagtgatc tatcaggcac 300
cagacttggg atcagttata aactctagag tgcttactgc agtgcattgt attcagtcag 360
cttttgatga agctatgtca tactgtcgat atcatccttc caaagggtat tgggtggcact 420

```

```

tcaaagatca tgaagagcaa gataaagtca gacctaaagc caaaaggaaa gaagaaccaa 480
gctctatattt tcagagacaa cgtgtggatg ctttactttt agacctcaga caaaaatttc 540
caccctaaatt tgtgcagcta aagcctggag aaaagcctgt tcaagtggat caaacaaaga 600
aagaggcaga acctatacca gaaactgtaa aacctgagga gaaggagacc cccnnagaat 660
gtacaaccag accgggagtg ctaaaggccc ccctgaaaaa cggatgagac ttcagtgagt 720
actggacaaa agagaagcct ggaagactcc tcatgctagt tatcatacct cagtactgtg 780
gctcttgagc tttgaagtac tttattgtaa ccttcttatt tgtatggaat gcgcttattt 840
tttgaaagga tattaggccg gatgtggtgg ctcacgcctg taatcccagc actttgggag 900
gccatggcgg gtggatcact tgaggtcaga agttcaagac cagcctgacc aatatggtga 960
aaccocgtct ctactaaaaa tacaaaaaatt agccgggcgt ggtggcgggc gcccgtagtc 1020
ccagctactc gggaggctga gacaggagac ttgcttgaac ccgggaggtg gaggttgccc 1080
tgagctgatt atcatgctgt tgcactccag cttgggcgac agagcgagac tttgtctcaa 1140
aaaagaagaa aagatattac tcccatcatg atttcttggt aatatttggt atatgtcttc 1200
tgtaaccttt cctctcccgg acttgagcaa cctacacact cacatgttta ctggtagata 1260
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<210> 144

<211> 233

<212> PRT

<213> Homo Sapiens

<400> 144

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Leu Leu Gly Ile Ser Trp Val Asp Ser Ser Trp Ile Pro Ile Leu Asn
1          5          10          15
Ser Gly Ser Val Leu Asp Tyr Phe Ser Glu Arg Ser Asn Pro Phe Tyr
          20          25          30
Asp Arg Thr Cys Asn Asn Glu Val Val Lys Met Gln Arg Leu Thr Leu
          35          40          45
Glu His Leu Asn Gln Met Val Gly Ile Glu Tyr Ile Leu Leu His Ala
          50          55          60
Gln Glu Pro Ile Leu Phe Ile Ile Arg Lys Gln Gln Arg Gln Ser Pro
65          70          75          80
Ala Gln Val Ile Pro Leu Ala Asp Tyr Tyr Ile Ile Ala Gly Val Ile
          85          90          95
Tyr Gln Ala Pro Asp Leu Gly Ser Val Ile Asn Ser Arg Val Leu Thr
          100          105          110
Ala Val His Gly Ile Gln Ser Ala Phe Asp Glu Ala Met Ser Tyr Cys
          115          120          125
Arg Tyr His Pro Ser Lys Gly Tyr Trp Trp His Phe Lys Asp His Glu
          130          135          140
Glu Gln Asp Lys Val Arg Pro Lys Ala Lys Arg Lys Glu Glu Pro Ser
145          150          155          160
Ser Ile Phe Gln Arg Gln Arg Val Asp Ala Leu Leu Leu Asp Leu Arg
          165          170          175
Gln Lys Phe Pro Pro Lys Phe Val Gln Leu Lys Pro Gly Glu Lys Pro
          180          185          190
Val Gln Val Asp Gln Thr Lys Lys Glu Ala Glu Pro Ile Pro Glu Thr
          195          200          205
Val Lys Pro Glu Glu Lys Glu Thr Pro Glu Cys Thr Thr Arg Pro Gly
210          215          220
Val Leu Lys Ala Pro Leu Lys Asn Gly
225          230

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<210> 145

<211> 1528

<212> DNA

<213> Homo Sapiens

<400> 145

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ccccctttt tttttaaact aaaatggagg ctggtttctt gccttaagga gccattgcc      60
tttcccgtcg aagtctagat gttgacatgt aataaagcgg gcagcaggat ggtggtggat      120
gcggccaaact ccaatggggc tttccagccc gtggtccttc tccatattcg agatgttccct      180
cctgctgata aagagaagct ttttatccag aagttacgtc agtgttgctt cctctttgac      240
tttgtttctg atccactaag tgacctaaag tgggaaggaag taaaacgagc tgctttaagt      300
gaaatggtag aatatatcac ccataatcgg aatgtgatac cagagcctat ttaccagaa      360
gtagtccata tgtttgcagt taacatgttt cgaacattac caccttcctc caatcctacg      420
ggagcgggaat ttgaccggga ggaagatgaa ccaacgttag aagcagcctg gcctcatcta      480
cagcttggtt atgaattttt cttaagattt ttagagtctc cagatttcca acctaatata      540
gcgaagaaat atattgatca gaagtttgta ttgcagcttt tagagctctt tgacagtga      600
gatcctcggg agagagattt tcttaaaacc acccttcaca gaatctatgg gaaattccta      660
ggcttgagag cttacatcag aaaacagata aataatatat tttatagggt tatttatgaa      720
acagagcatc ataatggcat agcagagtta ctggaaatat tgggaagtat aattaatgga      780
tttgctttac cactaaaaga agagcacaag attttcttat tgaagggtgt actacctttg      840
caciaagtga aatctctgag tgtctaccat cccagctggg catactgtgt agtgcagttt      900
ttagaaaagg acagcacctt caggaacca gtggtgatgg cacttctcaa atactggcca      960
aagactcaca gtccaaaaga agtaatgttc ttaaacgaat tagaagagat tttagatgtc     1020
attgaacctt cagaatttgt gaagatcatg gaacccctct tccggcagtt ggccaaatgt     1080
gtctccagcc cacacttcca ggtggcagag ctagctctct attactggaa taatgaatac     1140
atcatgagtt taatcagtga caacgcagcg aagattctgc ccatcatgtt tcttctcttg     1200
taccgcaact caaagacca ttggaacaag acaatacatg gcttgatata caacgccttg     1260
aagctcttca tggagatgaa ccaaagcta tttgatgact gtacacaaca gttcaaagca     1320
gagaaactaa aagagaagct aaaaatgaaa gaacgggaag aagcatgggt taaaatagaa     1380
aatctagcca aagccaatcc ccaggtacta aaaaagagaa taacatgaaa aggccagggg     1440
ttacttgaat gtttttataa gataggaata tatgtcttca ccatgggggg ggtctcgatt     1500
tcactaacgt tgtatatgaa aatgtctg                                     1528

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<210> 146

<211> 449

<212> PRT

<213> Homo Sapiens

<400> 146

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Met Leu Thr Cys Asn Lys Ala Gly Ser Arg Met Val Val Asp Ala Ala
 1          5          10          15
Asn Ser Asn Gly Pro Phe Gln Pro Val Val Leu Leu His Ile Arg Asp
          20          25          30
Val Pro Pro Ala Asp Gln Glu Lys Leu Phe Ile Gln Lys Leu Arg Gln
          35          40          45
Cys Cys Val Leu Phe Asp Phe Val Ser Asp Pro Leu Ser Asp Leu Lys
          50          55          60
Trp Lys Glu Val Lys Arg Ala Ala Leu Ser Glu Met Val Glu Tyr Ile
          65          70          75          80
Thr His Asn Arg Asn Val Ile Thr Glu Pro Ile Tyr Pro Glu Val Val
          85          90          95
His Met Phe Ala Val Asn Met Phe Arg Thr Leu Pro Pro Ser Ser Asn
          100         105         110
Pro Thr Gly Ala Glu Phe Asp Pro Glu Glu Asp Glu Pro Thr Leu Glu
          115         120         125
Ala Ala Trp Pro His Leu Gln Leu Val Tyr Glu Phe Phe Leu Arg Phe
          130         135         140

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Leu Glu Ser Pro Asp Phe Gln Pro Asn Ile Ala Lys Lys Tyr Ile Asp
 145 150 155 160
 Gln Lys Phe Val Leu Gln Leu Leu Glu Leu Phe Asp Ser Glu Asp Pro
 165 170 175
 Arg Glu Arg Asp Phe Leu Lys Thr Thr Leu His Arg Ile Tyr Gly Lys
 180 185 190
 Phe Leu Gly Leu Arg Ala Tyr Ile Arg Lys Gln Ile Asn Asn Ile Phe
 195 200 205
 Tyr Arg Phe Ile Tyr Glu Thr Glu His His Asn Gly Ile Ala Glu Leu
 210 215 220
 Leu Glu Ile Leu Gly Ser Ile Ile Asn Gly Phe Ala Leu Pro Leu Lys
 225 230 235 240
 Glu Glu His Lys Ile Phe Leu Leu Lys Val Leu Leu Pro Leu His Lys
 245 250 255
 Val Lys Ser Leu Ser Val Tyr His Pro Gln Leu Ala Tyr Cys Val Val
 260 265 270
 Gln Phe Leu Glu Lys Asp Ser Thr Leu Thr Glu Pro Val Val Met Ala
 275 280 285
 Leu Leu Lys Tyr Trp Pro Lys Thr His Ser Pro Lys Glu Val Met Phe
 290 295 300
 Leu Asn Glu Leu Glu Glu Ile Leu Asp Val Ile Glu Pro Ser Glu Phe
 305 310 315 320
 Val Lys Ile Met Glu Pro Leu Phe Arg Gln Leu Ala Lys Cys Val Ser
 325 330 335
 Ser Pro His Phe Gln Val Ala Glu Arg Ala Leu Tyr Tyr Trp Asn Asn
 340 345 350
 Glu Tyr Ile Met Ser Leu Ile Ser Asp Asn Ala Ala Lys Ile Leu Pro
 355 360 365
 Ile Met Phe Pro Ser Leu Tyr Arg Asn Ser Lys Thr His Trp Asn Lys
 370 375 380
 Thr Ile His Gly Leu Ile Tyr Asn Ala Leu Lys Leu Phe Met Glu Met
 385 390 395 400
 Asn Gln Lys Leu Phe Asp Asp Cys Thr Gln Gln Phe Lys Ala Glu Lys
 405 410 415
 Leu Lys Glu Lys Leu Lys Met Lys Glu Arg Glu Glu Ala Trp Val Lys
 420 425 430
 Ile Glu Asn Leu Ala Lys Ala Asn Pro Gln Val Leu Lys Lys Arg Ile
 435 440 445
 Thr

<210> 147

<211> 1580

<212> DNA

<213> Homo Sapiens

<400> 147

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ataaccggag	cgctcccat	ggaccacacg	gagggcttgc	ccgcggagga	gccgcctgcg	120
catgctccat	cgctgggaa	atttggtgag	cggcctccac	ctaaacgact	tactagggaa	180
gctatgcgaa	attattttaa	agagcgaggg	gatcaaacag	tacttattct	tcatgcaaaa	240
gttgacacaga	agtcatatgg	aaatgaaaaa	agggtttttt	gcccacctcc	ttgtgtatat	300
cttatgggca	gcggatggaa	gaaaaaaaaa	gaacaaatgg	aacgcgatgg	ttgttctgaa	360
caagagtctc	aaccgtgtgc	atttattggg	ataggaaata	gtgaccaaga	aatgcagcag	420
ctaaacttgg	aaggaaagaa	ctattgcaca	gccaaaacat	tgtatatatc	tgactcagac	480

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aagcgaaagc acttcatttt ttctgtaaag atgtttctatg gcaacagtga tgacattggt      540
gtgttcctca gcaagcggat aaaagtcac tcacaaacctt ccaaaaagaa gcagtcattg      600
aaaaatgctg acttatgcat tgcctcagga acaaagggtg ctctgtttta tgcactacga      660
tcccagacag ttagtaccag atacttgcac gtagaaggag gtaattttca tgccagttca      720
cagcagtggg gagccttttt tattcatctc ttggatgatg atgaatcaga aggagaagaa      780
ttcacagtcc gagatgtcta catccattat ggacaaacat gcaaacttgt gtgctcagtt      840
actggcatgg cactcccaag attgataatt atgaaagttg ataagcatac cgcattattg      900
gatgcagatg atcctgtgtc acaactccat aaatgtgcat tttaccttaa ggatacagaa      960
agaatgtatt tgtgcctttc tcaagaaaga ataattcaat ttcaggccac tccatgtcca     1020
aaagaaccaa ataaagagat gataaatgat ggcgcttccg ggacaatcat tagcacagat     1080
aaggcagagt atacatttta tgagggaatg ggccctgtcc ttgccccagt cactcctgtg     1140
cctgtggtag agagccttca gttgaatggc ggtggggacg tagcaatgct tgaacttaca     1200
ggacagaatt tcaactccaa tttacgagtg tggtttgggg atgtagaagc tgaaactatg     1260
tacaggtgtg gagagagtat gctctgtgtc gtcccagaca tttctgcatt ccgagaaggt     1320
tggagatggg tccggcaacc agtccaggtt ccagtaactt tgggtccgaa tgatggaatc     1380
atttattcca ccagccttac ctttacctac acaccagaac cagggccacg gccacattgc     1440
agtgtagcag gagcaatcct tccagccaat tcaagccagg tgccccctaa cgaatcaaac     1500
acaaacagcg aggggaagtta cacaaacgcc agcacaaatt caaccagtgt cacatcatct     1560
acagccacag tggtatccta                                     1580

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<210> 148

<211> 500

<212> PRT

<213> Homo Sapiens

<400> 148

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Met Asp His Thr Glu Gly Leu Pro Ala Glu Glu Pro Pro Ala His Ala
 1          5          10          15
Pro Ser Pro Gly Lys Phe Gly Glu Arg Pro Pro Pro Lys Arg Leu Thr
          20          25          30
Arg Glu Ala Met Arg Asn Tyr Leu Lys Glu Arg Gly Asp Gln Thr Val
          35          40          45
Leu Ile Leu His Ala Lys Val Ala Gln Lys Ser Tyr Gly Asn Glu Lys
          50          55          60
Arg Phe Phe Cys Pro Pro Pro Cys Val Tyr Leu Met Gly Ser Gly Trp
65          70          75          80
Lys Lys Lys Lys Glu Gln Met Glu Arg Asp Gly Cys Ser Glu Gln Glu
          85          90          95
Ser Gln Pro Cys Ala Phe Ile Gly Ile Gly Asn Ser Asp Gln Glu Met
          100          105          110
Gln Gln Leu Asn Leu Glu Gly Lys Asn Tyr Cys Thr Ala Lys Thr Leu
          115          120          125
Tyr Ile Ser Asp Ser Asp Lys Arg Lys His Phe Ile Phe Ser Val Lys
          130          135          140
Met Phe Tyr Gly Asn Ser Asp Asp Ile Gly Val Phe Leu Ser Lys Arg
          145          150          155          160
Ile Lys Val Ile Ser Lys Pro Ser Lys Lys Lys Gln Ser Leu Lys Asn
          165          170          175
Ala Asp Leu Cys Ile Ala Ser Gly Thr Lys Val Ala Leu Phe Asn Arg
          180          185          190
Leu Arg Ser Gln Thr Val Ser Thr Arg Tyr Leu His Val Glu Gly Gly
          195          200          205
Asn Phe His Ala Ser Ser Gln Gln Trp Gly Ala Phe Phe Ile His Leu
          210          215          220
Leu Asp Asp Asp Glu Ser Glu Gly Glu Glu Phe Thr Val Arg Asp Val

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<210> 149
<211> 1248
<212> DNA
<213> Homo Sapiens
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aatcggattg agaagaacat cctgagctca gcggaactacg tggaacgtgg gcaggagcac      840
gtcaagacgg ccctggagaa ccagaagaag gtgaggaaga agaaagtctt gattgccatc      900
tgtgtgtcca tcaccgtcgt cctcctagca gtcattcattg gcgtcacagt ggttggataa      960
tgtcgacat  tgttggcact aggagcacca ggaaccagg  gcctggcctt ctctcccagc     1020
agcctggggg gcaggcagag cctccagtcg gacccttcc  tcacacactg gcccctatgc     1080
agaagggcag acagttcttc tggggttggc agctgctcat tcatgatggc ctctccttc     1140
aggcctcaat gcctggggga ggctgcact gtcctgattg gccgggacac acggttttgt     1200
aaaaaattaa aaaacaaaaa aagagcatag aaaaaaaaaa aaccgagt      1248

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<210> 150

<211> 297

<212> PRT

<213> Homo Sapiens

<400> 150

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Met Arg Asp Arg Thr His Glu Leu Arg Gln Gly Asp Asp Ser Ser Asp
 1           5           10           15
Glu Glu Asp Lys Glu Arg Val Ala Leu Val Val His Pro Gly Thr Ala
 20           25           30
Arg Leu Gly Ser Pro Asp Glu Glu Phe Phe His Lys Val Arg Thr Ile
 35           40           45
Arg Gln Thr Ile Val Lys Leu Gly Asn Lys Val Gln Glu Leu Glu Lys
 50           55           60
Gln Gln Val Thr Ile Leu Ala Thr Pro Leu Pro Glu Glu Ser Met Lys
 65           70           75           80
Gln Glu Leu Gln Asn Leu Arg Asp Glu Ile Lys Gln Leu Gly Arg Glu
 85           90           95
Ile Arg Leu Gln Leu Lys Ala Ile Glu Pro Gln Lys Glu Glu Ala Asp
100          105          110
Glu Asn Tyr Asn Ser Val Asn Thr Arg Met Arg Lys Thr Gln His Gly
115          120          125
Val Leu Ser Gln Gln Phe Val Glu Leu Ile Asn Lys Cys Asn Ser Met
130          135          140
Gln Ser Glu Tyr Arg Glu Lys Asn Val Glu Arg Ile Arg Arg Gln Leu
145          150          155          160
Lys Ile Thr Asn Ala Gly Met Val Ser Asp Glu Glu Leu Asp Gln Met
165          170          175
Leu Asp Ser Gly Gln Ser Glu Val Phe Val Ser Asn Ile Leu Lys Asp
180          185          190
Thr Gln Val Thr Arg Gln Ala Leu Asn Glu Ile Ser Ala Arg His Ser
195          200          205
Glu Ile Gln Gln Leu Glu Arg Ser Ile Arg Glu Leu His Asp Ile Phe
210          215          220
Thr Phe Leu Ala Thr Glu Val Glu Met Gln Gly Glu Met Ile Asn Arg
225          230          235          240
Ile Glu Lys Asn Ile Leu Ser Ser Ala Asp Tyr Val Glu Arg Gly Gln
245          250          255
Glu His Val Lys Thr Ala Leu Glu Asn Gln Lys Lys Val Arg Lys Lys
260          265          270
Lys Val Leu Ile Ala Ile Cys Val Ser Ile Thr Val Val Leu Leu Ala
275          280          285
Val Ile Ile Gly Val Thr Val Val Gly
290          295

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<210> 151

<211> 1953
 <212> DNA
 <213> Homo Sapiens

<400> 151

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tctgtccttc gacccgagcc ccgcgccttt tccgggaccc ctgccccgcg ggcagcgctg      120
ccaacctgcc ggccatggag accccgtccc agcggcgcgcg caccgcagc ggggcgagg      180
ccagctccac tccgtgtcg cccacccgca tcacccggct gcaggagaag gaggacctgc      240
aggagctcaa tgatcgcttg gcggtctaca tcgaccgtgt gcgctcgctg gaaacggaga      300
acgcagggtc gcgccttcgc atcaccgagt ctgaagaggt ggtcagccgc gaggtgtccg      360
gcatcaaggc cgctacgag gccgagctcg gggatgcccg caagaccctt gactcagtag      420
ccaaggagcg cgcgcgcctg cagctggagc tgagcaaagt gcgtgaggag ttttaaggagc      480
tgaaagcgcg caataccaag aaggagggtg acctgatagc tgctcaggct cggctgaagg      540
acctggaggc tctgtgaac tccaaggagg ccgcactgag cactgctctc agtgagaagc      600
gcacgctgga gggcgagctg catgatctgc ggggccagggt ggccaagctt gaggcagccc      660
taggtgaggc caagaagcaa cttcaggatg agatgctgcg gcgggtggat gctgagaaca      720
ggctgcagac catgaaggag gaactggact tccagaagaa catctacagt gaggagctgc      780
gtgagaccaa gcgcgcgtcat gagaccgac tgggtggagat tgacaatggg aagcagcgctg      840
agtttgagag ccggctggcg gatgcgctgc aggaactgcg gggccagcat gaggaccagg      900
tgagcagta taagaaggag ctggagaaga cttattctgc caagctggac aatgccaggc      960
agtctgctga gaggaacagc aacctggtgg gggctgcccc cgaggagctg cagcagtcgc      1020
gcatccgcat cgacagcctc tctgccagc tcagccagct ccagaagcag ctggcagcca      1080
aggaggcgaa gcttcgagac ctggaggact cactggcccg tgagcgggac accagccggc      1140
ggctgctggc ggaaaaggag cgggagatgg ccgagatgcg ggcaaggatg cagcagcagc      1200
tggaacagta ccaggagctt ctggacatca agctggccct ggacatggag atccacgcct      1260
accgcaagct cttggagggc gaggaggaga ggctacgcct gtccccccagc cctacctcgc      1320
agcgagcccg tggcctgctt tcctctcact catccagac acagggtggg ggcagcgtca      1380
ccaaaaagcg caaactggag tccactgaga gccgcagcag cttctcacag cacgcacgca      1440
ctagcgggcg cgtggccgtg gaggaggtgg atgaggaggg caagtttctc cggtgcgca      1500
acaagtccaa tgaggaccag tccatgggca attggcagat caagcgccag aatggagatg      1560
atcccttgct gacttacggg tccccaccaa agttcaccct gaaggctggg caggtggtga      1620
cgatctgggc tgcaggagct ggggccaccc acagccccc taccgacctg gtgtggaagg      1680
cacagaacac ctggggctgc gggaacagcc tgcgtacgyc tctcatcaac tccactgggg      1740
aagaagtggc catgcgcaag ctggtgcgct cagtgactgt ggttgaggac gacgaggatg      1800
aggatggaga tgacctgctc catcaccacc acgtgagtggt tagccgcgcg tgaggccgag      1860
cctgcactgg ggccaccagc caggcctggg ggcagcctct cccagcctc cccgtgccaa      1920
aaatcttttc attaaagaat gtttttgaac ttt                                     1953

```

<210> 152
 <211> 572
 <212> PRT
 <213> Homo Sapiens

<400> 152

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Met Glu Thr Pro Ser Gln Arg Arg Ala Thr Arg Ser Gly Ala Gln Ala
 1              5              10              15
Ser Ser Thr Pro Leu Ser Pro Thr Arg Ile Thr Arg Leu Gln Glu Lys
      20              25              30
Glu Asp Leu Gln Glu Leu Asn Asp Arg Leu Ala Val Tyr Ile Asp Arg
      35              40              45
Val Arg Ser Leu Glu Thr Glu Asn Ala Gly Leu Arg Leu Arg Ile Thr
      50              55              60
Glu Ser Glu Glu Val Val Ser Arg Glu Val Ser Gly Ile Lys Ala Ala
65              70              75              80

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Tyr Glu Ala Glu Leu Gly Asp Ala Arg Lys Thr Leu Asp Ser Val Ala
 85 90 95
 Lys Glu Arg Ala Arg Leu Gln Leu Glu Ser Lys Val Arg Glu Glu
 100 105 110
 Phe Lys Glu Leu Lys Ala Arg Asn Thr Lys Lys Glu Gly Asp Leu Ile
 115 120 125
 Ala Ala Gln Ala Arg Leu Lys Asp Leu Glu Ala Leu Leu Asn Ser Lys
 130 135 140
 Glu Ala Ala Leu Ser Thr Ala Leu Ser Glu Lys Arg Thr Leu Glu Gly
 145 150 155 160
 Glu Leu His Asp Leu Arg Gly Gln Val Ala Lys Leu Glu Ala Ala Leu
 165 170 175
 Gly Glu Ala Lys Lys Gln Leu Gln Asp Glu Met Leu Arg Arg Val Asp
 180 185 190
 Ala Glu Asn Arg Leu Gln Thr Met Lys Glu Glu Leu Asp Phe Gln Lys
 195 200 205
 Asn Ile Tyr Ser Glu Glu Leu Arg Glu Thr Lys Arg Arg His Glu Thr
 210 215 220
 Arg Leu Val Glu Ile Asp Asn Gly Lys Gln Arg Glu Phe Glu Ser Arg
 225 230 235 240
 Leu Ala Asp Ala Leu Gln Glu Leu Arg Ala Gln His Glu Asp Gln Val
 245 250 255
 Glu Gln Tyr Lys Lys Glu Leu Glu Lys Thr Tyr Ser Ala Lys Leu Asp
 260 265 270
 Asn Ala Arg Gln Ser Ala Glu Arg Asn Ser Asn Leu Val Gly Ala Ala
 275 280 285
 His Glu Glu Leu Gln Gln Ser Arg Ile Arg Ile Asp Ser Leu Ser Ala
 290 295 300
 Gln Leu Ser Gln Leu Gln Lys Gln Leu Ala Ala Lys Glu Ala Lys Leu
 305 310 315 320
 Arg Asp Leu Glu Asp Ser Leu Ala Arg Glu Arg Asp Thr Ser Arg Arg
 325 330 335
 Leu Leu Ala Glu Lys Glu Arg Glu Met Ala Glu Met Arg Ala Arg Met
 340 345 350
 Gln Gln Gln Leu Asp Glu Tyr Gln Glu Leu Leu Asp Ile Lys Leu Ala
 355 360 365
 Leu Asp Met Glu Ile His Ala Tyr Arg Lys Leu Leu Glu Gly Glu Glu
 370 375 380
 Glu Arg Leu Arg Leu Ser Pro Ser Pro Thr Ser Gln Arg Ser Arg Gly
 385 390 395 400
 Arg Ala Ser Ser His Ser Ser Gln Thr Gln Gly Gly Gly Ser Val Thr
 405 410 415
 Lys Lys Arg Lys Leu Glu Ser Thr Glu Ser Arg Ser Ser Phe Ser Gln
 420 425 430
 His Ala Arg Thr Ser Gly Arg Val Ala Val Glu Glu Val Asp Glu Glu
 435 440 445
 Gly Lys Phe Val Arg Leu Arg Asn Lys Ser Asn Glu Asp Gln Ser Met
 450 455 460
 Gly Asn Trp Gln Ile Lys Arg Gln Asn Gly Asp Asp Pro Leu Leu Thr
 465 470 475 480
 Tyr Arg Phe Pro Pro Lys Phe Thr Leu Lys Ala Gly Gln Val Val Thr
 485 490 495
 Ile Trp Ala Ala Gly Ala Gly Ala Thr His Ser Pro Pro Thr Asp Leu
 500 505 510
 Val Trp Lys Ala Gln Asn Thr Trp Gly Cys Gly Asn Ser Leu Arg Thr

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<210> 153
<211> 1610
<212> DNA
<213> Homo Sapiens
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<210> 154
<211> 369
<212> PRT
<213> Homo Sapiens
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50	55	60
Val Glu Glu Asp Leu Lys Ala Asp Glu Pro Ser Ser Glu Glu Ser Asp		
65	70	75
Leu Glu Ile Asp Lys Glu Gly Val Ile Glu Pro Asp Thr Asp Ala Pro		80
	85	90
Gln Glu Met Gly Asp Glu Asn Ala Glu Ile Thr Glu Glu Met Met Asp		95
	100	105
Gln Ala Asn Asp Lys Lys Val Ala Ala Ile Glu Ala Leu Asn Asp Gly		110
	115	120
Glu Leu Gln Lys Ala Ile Asp Leu Phe Thr Asp Ala Ile Lys Leu Asn		125
	130	135
Pro Arg Leu Ala Ile Leu Tyr Ala Lys Arg Ala Ser Val Phe Val Lys		140
145	150	155
Leu Gln Lys Pro Asn Ala Ala Ile Arg Asp Cys Asp Arg Ala Ile Glu		160
	165	170
Ile Asn Pro Asp Ser Ala Gln Pro Tyr Lys Trp Arg Gly Lys Ala His		175
	180	185
Arg Leu Leu Gly His Trp Glu Glu Ala Ala His Asp Leu Ala Leu Ala		190
	195	200
Cys Lys Leu Asp Tyr Asp Glu Asp Ala Ser Ala Met Leu Lys Glu Val		205
	210	215
Gln Pro Arg Ala Gln Lys Ile Ala Glu His Arg Arg Lys Tyr Glu Arg		220
225	230	235
Lys Arg Glu Glu Arg Glu Ile Lys Glu Arg Ile Glu Arg Val Lys Lys		240
	245	250
Ala Arg Glu Glu His Glu Arg Ala Gln Arg Glu Glu Glu Ala Arg Arg		255
	260	265
Gln Ser Gly Ala Gln Tyr Gly Ser Phe Pro Gly Gly Phe Pro Gly Gly		270
	275	280
Met Pro Gly Asn Phe Pro Gly Gly Met Pro Gly Met Gly Gly Gly Met		285
	290	295
Pro Gly Met Ala Gly Met Pro Gly Leu Asn Glu Ile Leu Ser Asp Pro		300
305	310	315
Glu Val Leu Ala Ala Met Gln Asp Pro Glu Val Met Val Ala Phe Gln		320
	325	330
Asp Val Ala Gln Asn Pro Ala Asn Met Ser Lys Tyr Gln Ser Asn Pro		335
	340	345
Lys Val Met Asn Leu Ile Ser Lys Leu Ser Ala Lys Phe Gly Gly Gln		350
	355	360
Ala		365

<210> 155
 <211> 1323
 <212> DNA
 <213> Homo Sapiens

<400> 155	
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aatcagttgg atatttcatt cattggtata catatggact gtaagggtgc tttcaggttg	120
cagaaaagat ggaaaaaagg acatgtgcac tctgccccaa agatgtcgaa tataatgtcc	180
tgtacttttg acaatcagag aatatagctg ctcattgagaa ttgtttgctg tattcttcag	240
gacttggtga atgtgaggat caggatccac ttaatcctga tagaagtttt gatgtggaat	300
cagtaaagaa agaaatccag agaggaagga agttgaaatg caaattttgt cataaaagag	360
gagccaccgt gggatgtgat ttaaaaaaact gtaacaagaa ttaccacttt ttctgtgcca	420

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agaaggacga cgcagttcca cagtctgatg gagttcgagg aatttataaa ctgctttgcc 480
agcaacatgc tcaattcccg atcatcgctc aaagtgctaa attttcagga gtgaaaagaa 540
aaagaggaag gaagaaaccc ctctcaggca atcatgtaca gccacccgaa acaatgaaat 600
gtaatacatt cataagacaa gtgaaagaag agcatggcag acacacagat gcaactgtga 660
aagttccttt tcttaagaaa tgcaagggaa gcaggacttc ttaattactt acttgaagaa 720
atattagnca aagttcattc aattccagaa aaactcatgg atgagactta cttcagaatc 780
agactatgaa gaaatcgggg gtgcactttt tgactgtaga ttgttcgaag acacatttgt 840
aaattttcaa gcagcaatag agaaaaaaat tcatgcatct caacaaaggt ggcagcagtt 900
gaaggaagag attgagctac ttcaggactt aaaacaaacc ttgtgctctt ttcaagaaaa 960
tagagatctt atgtcaagtt ctacatcaat atcatccctg tcttattagg gattaccatt 1020
tctaagcca agagtcatgt caaattgcaa tcagggtcaa aaccagagac caggctgtga 1080
aatccacaca tctttagaac tagtcgtctc ctcttggcct cagcagctct tccctgttct 1140
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tcccagcacc tagtatgctc agtaaagtgt tgtggaataa gtgcataaaa tgttcttaac 1260
ctttgattct acttacagcc catgatagcc tcttagatat aataaatttg gattatacta 1320
aaa 1323

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<210> 156
 <211> 191
 <212> PRT
 <213> Homo Sapiens

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<400> 156
Met Glu Lys Arg Thr Cys Ala Leu Cys Pro Lys Asp Val Glu Tyr Asn
 1           5           10           15
Val Leu Tyr Phe Ala Gln Ser Glu Asn Ile Ala Ala His Glu Asn Cys
          20           25           30
Leu Leu Tyr Ser Ser Gly Leu Val Glu Cys Glu Asp Gln Asp Pro Leu
          35           40           45
Asn Pro Asp Arg Ser Phe Asp Val Glu Ser Val Lys Lys Glu Ile Gln
          50           55           60
Arg Gly Arg Lys Leu Lys Cys Lys Phe Cys His Lys Arg Gly Ala Thr
          65           70           75           80
Val Gly Cys Asp Leu Lys Asn Cys Asn Lys Asn Tyr His Phe Phe Cys
          85           90           95
Ala Lys Lys Asp Asp Ala Val Pro Gln Ser Asp Gly Val Arg Gly Ile
          100          105          110
Tyr Lys Leu Leu Cys Gln Gln His Ala Gln Phe Pro Ile Ile Ala Gln
          115          120          125
Ser Ala Lys Phe Ser Gly Val Lys Arg Lys Arg Gly Arg Lys Lys Pro
          130          135          140
Leu Ser Gly Asn His Val Gln Pro Pro Glu Thr Met Lys Cys Asn Thr
          145          150          155          160
Phe Ile Arg Gln Val Lys Glu Glu His Gly Arg His Thr Asp Ala Thr
          165          170          175
Val Lys Val Pro Phe Leu Lys Lys Cys Lys Gly Ser Arg Thr Ser
          180          185          190

```

<210> 157
 <211> 4065
 <212> DNA
 <213> Homo Sapiens

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<400> 157
atgtcgactg gggacagttt tgagactcga tttgaaaaaa tggacaacct gctgcgggat 60

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ttggattttc	ctgccttaag	aaaaaacaaa	aatatggaca	actttttaag	cagatataaa	180
gacacaataa	ataaaatcag	agattttacga	atgaaagctg	aagattatga	agtagtgaag	240
gtgattggta	gagggtgcatt	tggagaagtt	caattggtaa	ggcataaatc	caccaggaag	300
gtatatgcta	tgaagcttct	cagcaaattt	gaaatgataa	agagatctga	ttctgctttt	360
ttctgggaag	aaagggacat	catggctttt	gccaacagtc	cttgggttgt	tcagcttttt	420
tatgcattcc	aagatgatcg	ttatctctac	atgggtgatgg	aatacatgcc	tgggtggagat	480
cttgtaaact	taatgagcaa	ctatgatgtg	cctgaaaaat	gggcacgatt	ctatactgca	540
gaagtagttc	ttgcattgga	tgcaatccat	tccatgggtt	ttattcacag	agatgtgaag	600
cctgataaca	tgctgctgga	taaactctgga	catttgaagt	tagcagattt	tggtagttgt	660
atgaagatga	ataaggaagg	catggtacga	tgtgatacag	cggttgggaac	acctgattat	720
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tctgagatga	ttggagacct	tcaagctcga	attacatctt	tacaagagga	ggtgaagcat	1920
ctcaaacata	atctcgaaaa	agtggaaagga	gaaagaaaag	aggctcaaga	catgcttaat	1980
cactcagaaa	aggaaaagaa	taattttagag	atagatttaa	actacaaact	taaatcatta	2040
caacaacggt	tagaacaaga	ggtaaatgaa	cacaaagtaa	ccaaagctcg	tttaactgac	2100
aaacatcaat	ctattgaaga	ggcaaagtct	gtggcaatgt	gtgagatgga	aaaaaagctg	2160
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tctgagcagt	tggcgcgagg	ccttctggaa	gaacagtatt	ttgaattgac	gcaagaaagc	2760
aagaaagctg	cttcaagaaa	tagacaagag	attacagata	aagatcacac	tgtagtcgg	2820
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gagctaacag	agaaaatgaa	gaaggcagag	gaagaatata	aactggagaa	ggaggaggag	2940
atcagtaatc	ttaaggctgc	ctttgaaaag	aatatcaaca	ctgaacgaac	ccttaaaaca	3000
caggctgtta	acaaattggc	agaaataatg	aatcgaaaag	atttttaaaat	tgatagaaag	3060
aaagctaata	cacaagattt	gagaaagaaa	gaaaaggaaa	atcgaaagct	gcaactggaa	3120
ctcaaccaag	aaagagagaa	attcaaccag	atggtagtga	aacatcagaa	ggaactgaat	3180
gacatgcaag	cgcaattggg	agaagaatgt	gcacatagga	atgagcttca	gatgcagttg	3240
gccagcaaaag	agagtgatat	tgagcaattg	cgtgctaaac	ttttggacct	ctcggattct	3300
acaagtgttg	ctagttttcc	tagtgctgat	gaaactgatg	gtaacctccc	agagtcaaga	3360

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attgaagggtt ggcttttcagt accaaataga ggaaatatca aacgatatgg ctggaagaaa 3420
cagtatgttg tggttaagcag caaaaaaatt ttgttctata atgacgaaca agataaggag 3480
caatccaatc catctatggt attggacata gataaaactgt ttcacgtag acctgtaacc 3540
caaggagatg tgtatagagc tgaaactgaa gaaattccta aaatattcca gatactatat 3600
gcaaatgaag gtgaatgtag aaaagatgta gagatggaac cagtacaaca agctgaaaaa 3660
actaatttcc aaaatcacaa aggccatgag tttattccta cactctacca ctttcctgcc 3720
aattgtgatg cctgtgccaa acctctctgg catgttttta agccaccccc tgccctagag 3780
tgtcgaagat gccatgttaa gtgccacaga gatcacttag ataagaaaga ggacttaatt 3840
tgtccatgta aagtaagtta tgatgtaaca tcagcaagag atatgctgct gtttagcatgt 3900
tctcaggatg aacaaaaaaa atgggtaact catttagtaa agaaaatccc taagaatcca 3960
ccatctgggtt ttgttcgtgc ttccctcga acgctttcta caagatccac tgcaaatcag 4020
tctttccgga aagtgggtcaa aaatacatct ggaaaaacta gttaa 4065

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<210> 158

<211> 1354

<212> PRT

<213> Homo Sapiens

<400> 158

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Met Ser Thr Gly Asp Ser Phe Glu Thr Arg Phe Glu Lys Met Asp Asn
1          5          10          15
Leu Leu Arg Asp Pro Lys Ser Glu Val Asn Ser Asp Cys Leu Leu Asp
20          25          30
Gly Leu Asp Ala Leu Val Tyr Asp Leu Asp Phe Pro Ala Leu Arg Lys
35          40          45
Asn Lys Asn Ile Asp Asn Phe Leu Ser Arg Tyr Lys Asp Thr Ile Asn
50          55          60
Lys Ile Arg Asp Leu Arg Met Lys Ala Glu Asp Tyr Glu Val Val Lys
65          70          75          80
Val Ile Gly Arg Gly Ala Phe Gly Glu Val Gln Leu Val Arg His Lys
85          90          95
Ser Thr Arg Lys Val Tyr Ala Met Lys Leu Leu Ser Lys Phe Glu Met
100          105          110
Ile Lys Arg Ser Asp Ser Ala Phe Phe Trp Glu Glu Arg Asp Ile Met
115          120          125
Ala Phe Ala Asn Ser Pro Trp Val Val Gln Leu Phe Tyr Ala Phe Gln
130          135          140
Asp Asp Arg Tyr Leu Tyr Met Val Met Glu Tyr Met Pro Gly Gly Asp
145          150          155          160
Leu Val Asn Leu Met Ser Asn Tyr Asp Val Pro Glu Lys Trp Ala Arg
165          170          175
Phe Tyr Thr Ala Glu Val Val Leu Ala Leu Asp Ala Ile His Ser Met
180          185          190
Gly Phe Ile His Arg Asp Val Lys Pro Asp Asn Met Leu Leu Asp Lys
195          200          205
Ser Gly His Leu Lys Leu Ala Asp Phe Gly Thr Cys Met Lys Met Asn
210          215          220
Lys Glu Gly Met Val Arg Cys Asp Thr Ala Val Gly Thr Pro Asp Tyr
225          230          235          240
Ile Ser Pro Glu Val Leu Lys Ser Gln Gly Gly Asp Gly Tyr Tyr Gly
245          250          255
Arg Glu Cys Asp Trp Trp Ser Val Gly Val Phe Leu Tyr Glu Met Leu
260          265          270
Val Gly Asp Thr Pro Phe Tyr Ala Asp Ser Leu Val Gly Thr Tyr Ser
275          280          285

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Lys Ile Met Asn His Lys Asn Ser Leu Thr Phe Pro Asp Asp Asn Asp
 290 295 300
 Ile Ser Lys Glu Ala Lys Asn Leu Ile Cys Ala Phe Leu Thr Asp Arg
 305 310 315 320
 Glu Val Arg Leu Gly Arg Asn Gly Val Glu Glu Ile Lys Arg His Leu
 325 330 335
 Phe Phe Lys Asn Asp Gln Trp Ala Trp Glu Thr Leu Arg Asp Thr Val
 340 345 350
 Ala Pro Val Val Pro Asp Leu Ser Ser Asp Ile Asp Thr Ser Asn Phe
 355 360 365
 Asp Asp Leu Glu Glu Asp Lys Gly Glu Glu Glu Thr Phe Pro Ile Pro
 370 375 380
 Lys Ala Phe Val Gly Asn Gln Leu Pro Phe Val Gly Phe Thr Tyr Tyr
 385 390 395 400
 Ser Asn Arg Arg Tyr Leu Ser Ser Ala Asn Pro Asn Asp Asn Arg Thr
 405 410 415
 Ser Ser Asn Ala Asp Lys Ser Leu Gln Glu Ser Leu Gln Lys Thr Ile
 420 425 430
 Tyr Lys Leu Glu Glu Gln Leu His Asn Glu Met Gln Leu Lys Asp Glu
 435 440 445
 Met Glu Gln Lys Cys Arg Thr Ser Asn Ile Lys Leu Asp Lys Ile Met
 450 455 460
 Lys Glu Leu Asp Glu Glu Gly Asn Gln Arg Arg Asn Leu Glu Ser Thr
 465 470 475 480
 Val Ser Gln Ile Glu Lys Glu Lys Met Leu Leu Gln His Arg Ile Asn
 485 490 495
 Glu Tyr Gln Arg Lys Ala Glu Gln Glu Asn Glu Lys Arg Arg Asn Val
 500 505 510
 Glu Asn Glu Val Ser Thr Leu Lys Asp Gln Leu Glu Asp Leu Lys Lys
 515 520 525
 Val Ser Gln Asn Ser Gln Leu Ala Asn Glu Lys Leu Ser Gln Leu Gln
 530 535 540
 Lys Gln Leu Glu Glu Ala Asn Asp Leu Leu Arg Thr Glu Ser Asp Thr
 545 550 555 560
 Ala Val Arg Leu Arg Lys Ser His Thr Glu Met Ser Lys Ser Ile Ser
 565 570 575
 Gln Leu Glu Ser Leu Asn Arg Glu Leu Gln Glu Arg Asn Arg Ile Leu
 580 585 590
 Glu Asn Ser Lys Ser Gln Thr Asp Lys Asp Tyr Tyr Gln Leu Gln Ala
 595 600 605
 Ile Leu Glu Ala Glu Arg Arg Asp Arg Gly His Asp Ser Glu Met Ile
 610 615 620
 Gly Asp Leu Gln Ala Arg Ile Thr Ser Leu Gln Glu Glu Val Lys His
 625 630 635 640
 Leu Lys His Asn Leu Glu Lys Val Glu Gly Glu Arg Lys Glu Ala Gln
 645 650 655
 Asp Met Leu Asn His Ser Glu Lys Glu Lys Asn Asn Leu Glu Ile Asp
 660 665 670
 Leu Asn Tyr Lys Leu Lys Ser Leu Gln Gln Arg Leu Glu Gln Glu Val
 675 680 685
 Asn Glu His Lys Val Thr Lys Ala Arg Leu Thr Asp Lys His Gln Ser
 690 695 700
 Ile Glu Glu Ala Lys Ser Val Ala Met Cys Glu Met Glu Lys Lys Leu
 705 710 715 720
 Lys Glu Glu Arg Glu Ala Arg Glu Lys Ala Glu Asn Arg Val Val Gln

				725						730					735				
Ile	Glu	Lys	Gln	Cys	Ser	Met	Leu	Asp	Val	Asp	Leu	Lys	Gln	Ser	Gln				
				740						745					750				
Gln	Lys	Leu	Glu	His	Leu	Thr	Gly	Asn	Lys	Glu	Arg	Met	Glu	Asp	Glu				
				755						760					765				
Val	Lys	Asn	Leu	Thr	Leu	Gln	Leu	Glu	Gln	Glu	Ser	Asn	Lys	Arg	Leu				
				770						775					780				
Leu	Leu	Gln	Asn	Glu	Leu	Lys	Thr	Gln	Ala	Phe	Glu	Ala	Asp	Asn	Leu				
				785						790					795				800
Lys	Gly	Leu	Glu	Lys	Gln	Met	Lys	Gln	Glu	Ile	Asn	Thr	Leu	Leu	Glu				
				805						810					815				
Ala	Lys	Arg	Leu	Leu	Glu	Phe	Glu	Leu	Ala	Gln	Leu	Thr	Lys	Gln	Tyr				
				820						825					830				
Arg	Gly	Asn	Glu	Gly	Gln	Met	Arg	Glu	Leu	Gln	Asp	Gln	Leu	Glu	Ala				
				835						840					845				
Glu	Gln	Tyr	Phe	Ser	Thr	Leu	Tyr	Lys	Thr	Gln	Val	Lys	Glu	Leu	Lys				
				850						855					860				
Glu	Glu	Ile	Glu	Glu	Lys	Asn	Arg	Glu	Asn	Leu	Lys	Lys	Ile	Gln	Glu				
				865						870					875				880
Leu	Gln	Asn	Glu	Lys	Glu	Thr	Leu	Ala	Thr	Gln	Leu	Asp	Leu	Ala	Glu				
				885						890					895				
Thr	Lys	Ala	Glu	Ser	Glu	Gln	Leu	Ala	Arg	Gly	Leu	Leu	Glu	Glu	Gln				
				900						905					910				
Tyr	Phe	Glu	Leu	Thr	Gln	Glu	Ser	Lys	Lys	Ala	Ala	Ser	Arg	Asn	Arg				
				915						920					925				
Gln	Glu	Ile	Thr	Asp	Lys	Asp	His	Thr	Val	Ser	Arg	Leu	Glu	Glu	Ala				
				930						935					940				
Asn	Ser	Met	Leu	Thr	Lys	Asp	Ile	Glu	Ile	Leu	Arg	Arg	Glu	Asn	Glu				
				945						950					955				960
Glu	Leu	Thr	Glu	Lys	Met	Lys	Lys	Ala	Glu	Glu	Glu	Tyr	Lys	Leu	Glu				
				965						970					975				
Lys	Glu	Glu	Glu	Ile	Ser	Asn	Leu	Lys	Ala	Ala	Phe	Glu	Lys	Asn	Ile				
				980						985					990				
Asn	Thr	Glu	Arg	Thr	Leu	Lys	Thr	Gln	Ala	Val	Asn	Lys	Leu	Ala	Glu				
				995						1000					1005				
Ile	Met	Asn	Arg	Lys	Asp	Phe	Lys	Ile	Asp	Arg	Lys	Lys	Ala	Asn	Thr				
				1010						1015					1020				
Gln	Asp	Leu	Arg	Lys	Lys	Glu	Lys	Glu	Asn	Arg	Lys	Leu	Gln	Leu	Glu				
				1025						1030					1035				104
Leu	Asn	Gln	Glu	Arg	Glu	Lys	Phe	Asn	Gln	Met	Val	Val	Lys	His	Gln				
				1045						1050					1055				
Lys	Glu	Leu	Asn	Asp	Met	Gln	Ala	Gln	Leu	Val	Glu	Glu	Cys	Ala	His				
				1060						1065					1070				
Arg	Asn	Glu	Leu	Gln	Met	Gln	Leu	Ala	Ser	Lys	Glu	Ser	Asp	Ile	Glu				
				1075						1080					1085				
Gln	Leu	Arg	Ala	Lys	Leu	Leu	Asp	Leu	Ser	Asp	Ser	Thr	Ser	Val	Ala				
				1090						1095					1100				
Ser	Phe	Pro	Ser	Ala	Asp	Glu	Thr	Asp	Gly	Asn	Leu	Pro	Glu	Ser	Arg				
				1105						1110					1115				112
Ile	Glu	Gly	Trp	Leu	Ser	Val	Pro	Asn	Arg	Gly	Asn	Ile	Lys	Arg	Tyr				
				1125						1130					1135				
Gly	Trp	Lys	Lys	Gln	Tyr	Val	Val	Val	Ser	Ser	Lys	Lys	Ile	Leu	Phe				
				1140						1145					1150				
Tyr	Asn	Asp	Glu	Gln	Asp	Lys	Glu	Gln	Ser	Asn	Pro	Ser	Met	Val	Leu				
				1155						1160					1165				

Asp Ile Asp Lys Leu Phe His Val Arg Pro Val Thr Gln Gly Asp Val
 1170 1175 1180
 Tyr Arg Ala Glu Thr Glu Glu Ile Pro Lys Ile Phe Gln Ile Leu Tyr
 1185 1190 1195 1200
 Ala Asn Glu Gly Glu Cys Arg Lys Asp Val Glu Met Glu Pro Val Gln
 1205 1210 1215
 Gln Ala Glu Lys Thr Asn Phe Gln Asn His Lys Gly His Glu Phe Ile
 1220 1225 1230
 Pro Thr Leu Tyr His Phe Pro Ala Asn Cys Asp Ala Cys Ala Lys Pro
 1235 1240 1245
 Leu Trp His Val Phe Lys Pro Pro Pro Ala Leu Glu Cys Arg Arg Cys
 1250 1255 1260
 His Val Lys Cys His Arg Asp His Leu Asp Lys Lys Glu Asp Leu Ile
 1265 1270 1275 1280
 Cys Pro Cys Lys Val Ser Tyr Asp Val Thr Ser Ala Arg Asp Met Leu
 1285 1290 1295
 Leu Leu Ala Cys Ser Gln Asp Glu Gln Lys Lys Trp Val Thr His Leu
 1300 1305 1310
 Val Lys Lys Ile Pro Lys Asn Pro Pro Ser Gly Phe Val Arg Ala Ser
 1315 1320 1325
 Pro Arg Thr Leu Ser Thr Arg Ser Thr Ala Asn Gln Ser Phe Arg Lys
 1330 1335 1340
 Val Val Lys Asn Thr Ser Gly Lys Thr Ser
 1345 1350

<210> 159
 <211> 683
 <212> DNA
 <213> Homo Sapiens

<400> 159
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 gtaatgtggc acttgaatgc agtgagccaa gcacaagtgt atctgcttat gaccagttga 120
 aggcaccggc atcccctggg gctggaaacc cacctgggac cccaaaggga aagagagagc 180
 tgatgagcaa tggcccaggt tccattattg gtgctaaagc tgggaagaat tctggcaaaa 240
 agaagggcct taacaatgaa ctgaacaacc ttccagtaat ctccaacatg acggctgcgt 300
 tagacagttg ctcggcagca gacggcagtt tggctgctga gatgcctaaa ctggaagcag 360
 aaggattaat tgacaagaaa aatttaggag ataaagaaaa gggcaaaaaa gctaacaact 420
 gcaaaacgga caaaaacctc tctaaactga aaagtgtccc gcccattgcc cctgccccag 480
 cccccactcc cccgcagcta atcgctatac ccaactgcaac ctttacaacg accaccactg 540
 ggacaatacc cggactgccc tccctcacia caactgttgt tcaggctaca ccaaagagtc 600
 ctccgttaaa acccattcaa ccaaagccca caattatggg agagcccatc accgtgaacc 660
 cagctctggg gtcactcaaa gac 683

<210> 160
 <211> 227
 <212> PRT
 <213> Homo Sapiens

<400> 160
 Lys Leu Glu Phe Glu Pro Asp Ser Glu Asp Lys Ile Ser Asp Cys Glu
 1 5 10 15
 Glu Gly Leu Ser Asn Val Ala Leu Glu Cys Ser Glu Pro Ser Thr Ser
 20 25 30
 Val Ser Ala Tyr Asp Gln Leu Lys Ala Pro Ala Ser Pro Gly Ala Gly

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      35              40              45
Asn Pro Pro Gly Thr Pro Lys Gly Lys Arg Glu Leu Met Ser Asn Gly
  50              55              60
Pro Gly Ser Ile Ile Gly Ala Lys Ala Gly Lys Asn Ser Gly Lys Lys
  65              70              75              80
Lys Gly Leu Asn Asn Glu Leu Asn Asn Leu Pro Val Ile Ser Asn Met
      85              90              95
Thr Ala Ala Leu Asp Ser Cys Ser Ala Ala Asp Gly Ser Leu Ala Ala
      100              105              110
Glu Met Pro Lys Leu Glu Ala Glu Gly Leu Ile Asp Lys Lys Asn Leu
      115              120              125
Gly Asp Lys Glu Lys Gly Lys Lys Ala Asn Asn Cys Lys Thr Asp Lys
      130              135              140
Asn Leu Ser Lys Leu Lys Ser Ala Arg Pro Ile Ala Pro Ala Pro Ala
      145              150              155              160
Pro Thr Pro Pro Gln Leu Ile Ala Ile Pro Thr Ala Thr Phe Thr Thr
      165              170              175
Thr Thr Thr Gly Thr Ile Pro Gly Leu Pro Ser Leu Thr Thr Thr Val
      180              185              190
Val Gln Ala Thr Pro Lys Ser Pro Pro Leu Lys Pro Ile Gln Pro Lys
      195              200              205
Pro Thr Ile Met Gly Glu Pro Ile Thr Val Asn Pro Ala Leu Val Ser
      210              215              220
Leu Lys Asp
      225

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<210> 161
 <211> 662
 <212> DNA
 <213> Homo Sapiens

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<400> 161
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acgctgagat gagtgaactg agtgtggcac agaaaccaga aaaacttttg gagcgctgca      120
agtactggcc tgcttgtaaa aatggggatg agtgtgccta ccatcacccc atctcaccct      180
gcaaagcctt cccaattgt aaatttgctg aaaaatgttt gtttgttcac ccaaattgta      240
aatatgatgc aaagtgtact aaaccagatt gtcccttcac tcatgtgagt agaagaattc      300
cagtactgtc tccaaaacca gttgcaccac cagcaccacc ttccagtagt cagctctgcc      360
gttacttccc tgcttgtaag aagatggaat gtcccttcta tcatccaaaa cattgtaggt      420
ttaacactca atgtacaaga ccggactgca cattctacca tcccaccatt aatgtcccac      480
cacgacatgc cttgaaatgg attcgacctc aaaccagcga atagcaccga gtccctgctg      540
gcagaagatc atgcagtttg gaagttttca tgtctgatga aagatctcta cagaacttgt      600
caaatctttg aaacttgga tatattgctt tcataatatg aagggtttatt ggctatctaa      660
aa

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<210> 162
 <211> 173
 <212> PRT
 <213> Homo Sapiens

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<400> 162
Pro Gln Gln Leu His Leu Leu Ser Arg Gln Leu Glu Asp Pro Asn Gly
  1              5              10              15
Ser Phe Ser Asn Ala Glu Met Ser Glu Leu Ser Val Ala Gln Lys Pro
      20              25              30

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Glu Lys Leu Leu Glu Arg Cys Lys Tyr Trp Pro Ala Cys Lys Asn Gly
 35 40 45
 Asp Glu Cys Ala Tyr His His Pro Ile Ser Pro Cys Lys Ala Phe Pro
 50 55 60
 Asn Cys Lys Phe Ala Glu Lys Cys Leu Phe Val His Pro Asn Cys Lys
 65 70 75 80
 Tyr Asp Ala Lys Cys Thr Lys Pro Asp Cys Pro Phe Thr His Val Ser
 85 90 95
 Arg Arg Ile Pro Val Leu Ser Pro Lys Pro Val Ala Pro Pro Ala Pro
 100 105 110
 Pro Ser Ser Ser Gln Leu Cys Arg Tyr Phe Pro Ala Cys Lys Lys Met
 115 120 125
 Glu Cys Pro Phe Tyr His Pro Lys His Cys Arg Phe Asn Thr Gln Cys
 130 135 140
 Thr Arg Pro Asp Cys Thr Phe Tyr His Pro Thr Ile Asn Val Pro Pro
 145 150 155 160
 Arg His Ala Leu Lys Trp Ile Arg Pro Gln Thr Ser Glu
 165 170

<210> 163

<211> 2912

<212> DNA

<213> Homo Sapiens

<400> 163

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atgcctgagg	aaacccagac	ccaagaccaa	cggatggagg	aggaggagggt	tgagacgttc	120
gcctttcagg	cagaaattgc	ccagttgatg	tcattgatca	tcaatacttt	ctactcgaac	180
aaagagatct	ttctgagaga	gctcatttca	aattcatcag	atgcattgga	caaaatccgg	240
tatgaaactt	tgacagatcc	cagtaaatta	gactctggga	aagagctgca	tattaacctt	300
ataccgaaca	aacaagatcg	aactctcact	attgtggata	ctggaattgg	aatgaccaag	360
gctgacttga	tcaataacct	tggtactatc	gccaaagtctg	ggaccaaagc	gttcatggaa	420
gctttgcagg	ctggtgcaga	tatctctatg	attggccagt	tcggtgttgg	tttttattct	480
gcttatttgg	ttgctgagaa	agtaactgtg	atcaccaaac	ataacgatga	tgagcagtac	540
gcttgaggag	cctcagcagg	gggatcatte	acagtgagga	cagacacagg	tgaacctatg	600
ggtcgtggaa	caaaagtatt	cctacacctg	aaagaagacc	aaactgagta	cttgaggagg	660
cgaagaataa	aggagattgt	gaagaaacat	tctcagttta	ttggatatcc	cattactctt	720
tttgtggaga	aggaacgtga	taaagaagta	agcgatgatg	aggctgaaga	aaaggaagac	780
aaagaagaag	aaaaagaaaa	agaagagaaa	gagtcggaag	acaaacctga	aattgaagat	840
gttggttctg	atgaggaaga	agaaaagaag	gatggtgaca	agaagaagaa	gaagaagatt	900
aaggaaaagt	acatcgatca	agaagagctc	aacaaaacaa	agcccatctg	gaccagaaat	960
cccgaacgata	ttactaatga	ggagtacgga	gaattctata	agagcttgac	caatgactgg	1020
gaagatcact	tggcagtga	gcatttttca	gttgaaggac	agttggaatt	cagagccctt	1080
ctatttgtcc	cacgacgtgc	tccttttgat	ctgtttgaaa	acagaaagaa	aaagaacaat	1140
atcaaattgt	atgtacgcag	agttttcatc	atggataact	gtgaggagct	aatccctgaa	1200
tatctgaact	tcattagagg	ggtggttagac	tcggaggatc	tcctctataa	catatcccgt	1260
gagatgttgc	aacaaagcaa	aattttgaaa	gttatcagga	agaatttggg	caaaaaatgc	1320
ttagaactct	ttactgaact	ggcggaagat	aaagagaact	acaagaaatt	ctatgagcag	1380
ttctctaaaa	acataaagct	tggataacac	gaagactctc	aaaatcggaa	gaagctttca	1440
gagctgttaa	ggtactacac	atctgcctct	ggtgatgaga	tggtttctct	caaggactac	1500
tgcaccagaa	tgaaggagaa	ccagaaacat	atctattata	tcacagggtga	gaccaaggac	1560
caggtagcta	actcagcctt	tgtggaacgt	cttcggaaac	atggcttaga	agtgatctat	1620
atgattgagc	ccattgatga	gtactgtgtc	caacagctga	aggaatttga	ggggaagact	1680
ttagtgtcag	tcaccaaaga	aggcctggaa	cttcagagg	atgaagaaga	gaaaaagaag	1740
caggaagaga	aaaaaacaaa	gtttgagaac	ctctgcaaaa	tcataaaga	catattggag	1800

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aaaaaagttg aaaaggtggt tgtgtcaaac cgattggtga catctccatg ctgtattgtc 1860
acaagcacat atggctggac agcaaacatg gagagaatca tgaaagctca agccctaaga 1920
gacaactcaa caatgggtta catggcagca aagaaacacc tggagataaa ccccgaccat 1980
tccattattg agaccttaag gcaaaaggca gaggctgata agaacgacaa gtctgtgaag 2040
gatctggtca tcttgcttta tgaaactgcg ctctgtctct ctggcttcag tctggaagat 2100
ccccagacac atgctaacag gatctacagg atgatcaaac ttggtctggg tattgatgaa 2160
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gagtttcatg ttggttcttt cacagatggg gtaacgtgca ctgtaagacg tatgtaacat 2520
gatgttaact ttgtgtggtc taaagtgttt agctgtcaag ccggatgcct aagtagacca 2580
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gtcctctaga aataggttaa actgaagcaa cttgatggaa ggatctctcc acagggcttg 2760
ttttccaaag aaaagtattg tttggaggag caaagttaaa agcctaccta agcatatcgt 2820
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tctgcttaaa gttgtaacaa atacagatga gt 2912

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<210> 164

<211> 732

<212> PRT

<213> Homo Sapiens

<400> 164

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Met Pro Glu Glu Thr Gln Thr Gln Asp Gln Pro Met Glu Glu Glu Glu
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Val Glu Thr Phe Ala Phe Gln Ala Glu Ile Ala Gln Leu Met Ser Leu
20          25          30
Ile Ile Asn Thr Phe Tyr Ser Asn Lys Glu Ile Phe Leu Arg Glu Leu
35          40          45
Ile Ser Asn Ser Ser Asp Ala Leu Asp Lys Ile Arg Tyr Glu Thr Leu
50          55          60
Thr Asp Pro Ser Lys Leu Asp Ser Gly Lys Glu Leu His Ile Asn Leu
65          70          75          80
Ile Pro Asn Lys Gln Asp Arg Thr Leu Thr Ile Val Asp Thr Gly Ile
85          90          95
Gly Met Thr Lys Ala Asp Leu Ile Asn Asn Leu Gly Thr Ile Ala Lys
100          105          110
Ser Gly Thr Lys Ala Phe Met Glu Ala Leu Gln Ala Gly Ala Asp Ile
115          120          125
Ser Met Ile Gly Gln Phe Gly Val Gly Phe Tyr Ser Ala Tyr Leu Val
130          135          140
Ala Glu Lys Val Thr Val Ile Thr Lys His Asn Asp Asp Glu Gln Tyr
145          150          155          160
Ala Trp Glu Ser Ser Ala Gly Gly Ser Phe Thr Val Arg Thr Asp Thr
165          170          175
Gly Glu Pro Met Gly Arg Gly Thr Lys Val Ile Leu His Leu Lys Glu
180          185          190
Asp Gln Thr Glu Tyr Leu Glu Glu Arg Arg Ile Lys Glu Ile Val Lys
195          200          205
Lys His Ser Gln Phe Ile Gly Tyr Pro Ile Thr Leu Phe Val Glu Lys
210          215          220
Glu Arg Asp Lys Glu Val Ser Asp Asp Glu Ala Glu Glu Lys Glu Asp

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225		230		235		240
Lys Glu Glu Glu Lys	Glu Lys Glu Glu Lys	Glu Ser Glu Asp Lys	Pro			
	245		250		255	
Glu Ile Glu Asp Val	Gly Ser Asp Glu Glu Glu Lys Lys Asp Gly					
	260		265		270	
Asp Lys Lys Lys Lys Lys Lys	Ile Lys Glu Lys Tyr Ile Asp Gln Glu					
	275		280		285	
Glu Leu Asn Lys Thr Lys Pro	Ile Trp Thr Arg Asn Pro Asp Asp Ile					
	290		295		300	
Thr Asn Glu Glu Tyr Gly Glu	Phe Tyr Lys Ser Leu Thr Asn Asp Trp					
	305		310		315	
Glu Asp His Leu Ala Val	Lys His Phe Ser Val Glu Gly Gln Leu Glu					
	325		330		335	
Phe Arg Ala Leu Leu Phe	Val Pro Arg Arg Ala Pro Phe Asp Leu Phe					
	340		345		350	
Glu Asn Arg Lys Lys Lys	Asn Asn Ile Lys Leu Tyr Val Arg Arg Val					
	355		360		365	
Phe Ile Met Asp Asn Cys	Glu Glu Leu Ile Pro Glu Tyr Leu Asn Phe					
	370		375		380	
Ile Arg Gly Val Val Asp	Ser Glu Asp Leu Pro Leu Asn Ile Ser Arg					
	385		390		395	
Glu Met Leu Gln Gln Ser	Lys Ile Leu Lys Val Ile Arg Lys Asn Leu					
	405		410		415	
Val Lys Lys Cys Leu Glu	Leu Phe Thr Glu Leu Ala Glu Asp Lys Glu					
	420		425		430	
Asn Tyr Lys Lys Phe Tyr	Glu Gln Phe Ser Lys Asn Ile Lys Leu Gly					
	435		440		445	
Ile His Glu Asp Ser Gln	Asn Arg Lys Lys Leu Ser Glu Leu Leu Arg					
	450		455		460	
Tyr Tyr Thr Ser Ala Ser	Gly Asp Glu Met Val Ser Leu Lys Asp Tyr					
	465		470		475	
Cys Thr Arg Met Lys Glu	Asn Gln Lys His Ile Tyr Tyr Ile Thr Gly					
	485		490		495	
Glu Thr Lys Asp Gln Val	Ala Asn Ser Ala Phe Val Glu Arg Leu Arg					
	500		505		510	
Lys His Gly Leu Glu Val	Ile Tyr Met Ile Glu Pro Ile Asp Glu Tyr					
	515		520		525	
Cys Val Gln Gln Leu Lys	Glu Phe Glu Gly Lys Thr Leu Val Ser Val					
	530		535		540	
Thr Lys Glu Gly Leu Glu	Leu Pro Glu Asp Glu Glu Lys Lys Lys					
	545		550		555	
Gln Glu Glu Lys Lys Thr	Lys Phe Glu Asn Leu Cys Lys Ile Met Lys					
	565		570		575	
Asp Ile Leu Glu Lys Lys	Val Glu Lys Val Val Val Ser Asn Arg Leu					
	580		585		590	
Val Thr Ser Pro Cys Cys	Ile Val Thr Ser Thr Tyr Gly Trp Thr Ala					
	595		600		605	
Asn Met Glu Arg Ile Met	Lys Ala Gln Ala Leu Arg Asp Asn Ser Thr					
	610		615		620	
Met Gly Tyr Met Ala Ala	Lys Lys His Leu Glu Ile Asn Pro Asp His					
	625		630		635	
Ser Ile Ile Glu Thr Leu	Arg Gln Lys Ala Glu Ala Asp Lys Asn Asp					
	645		650		655	
Lys Ser Val Lys Asp Leu	Val Ile Leu Leu Tyr Glu Thr Ala Leu Leu					
	660		665		670	

Ser Ser Gly Phe Ser Leu Glu Asp Pro Gln Thr His Ala Asn Arg Ile
 675 680 685
 Tyr Arg Met Ile Lys Leu Gly Leu Gly Ile Asp Glu Asp Asp Pro Thr
 690 695 700
 Ala Asp Asp Thr Ser Ala Ala Val Thr Glu Glu Met Pro Pro Leu Glu
 705 710 715 720
 Gly Asp Asp Asp Thr Ser Arg Met Glu Glu Val Asp
 725 730

<210> 165
 <211> 790
 <212> DNA
 <213> Homo Sapiens

<400> 165
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<210> 166
 <211> 259
 <212> PRT
 <213> Homo Sapiens

<400> 166
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 35 40 45
 Gln Gln Gln Gln Arg Asn Leu Ser Leu His Glu Tyr Met Ser Met
 50 55 60
 Glu Leu Leu Gln Glu Ala Gly Val Ser Val Pro Lys Gly Tyr Val Ala
 65 70 75 80
 Lys Ser Pro Asp Glu Ala Tyr Ala Ile Ala Lys Lys Leu Gly Ser Lys
 85 90 95
 Asp Val Val Ile Lys Ala Gln Val Leu Ala Gly Gly Arg Gly Lys Gly
 100 105 110
 Thr Phe Glu Ser Gly Leu Lys Gly Gly Val Lys Ile Val Phe Ser Pro
 115 120 125
 Glu Glu Ala Lys Ala Val Ser Ser Gln Met Ile Gly Lys Lys Leu Phe
 130 135 140
 Thr Lys Gln Thr Gly Glu Lys Gly Arg Ile Cys Asn Gln Val Leu Val

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Cys Glu Arg Lys Tyr	Pro Arg Arg Glu Tyr Tyr Phe Ala Ile Thr Met					
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Glu Arg Ser Phe Gln Gly Pro Val Leu Ile Gly Ser Ser His Gly Gly						
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Val Asn Ile Glu Asp Val Ala Ala Glu Ser Pro Glu Ala Ile Ile Lys						
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Leu Ala Gln Lys Asn Gly Ile Ser Pro Asn Ile Gly Ile Ser Ser Arg						
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 <211> 5307
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 <213> Homo Sapiens

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5307

<210> 168
 <211> 1148
 <212> PRT
 <213> Homo Sapiens

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 35 40 45
 Ser Glu Lys Gln Thr Arg Gln Ala Pro Lys Arg Lys Ser Val Arg Arg
 50 55 60
 Gly Arg Lys Pro Pro Leu Lys Lys Lys Leu Arg Ser Ser Val Ala
 65 70 75 80
 Ala Pro Glu Lys Ser Ser Ser Asn Asp Ser Val Asp Glu Glu Thr Ala
 85 90 95
 Glu Ser Asp Thr Ser Pro Val Leu Glu Lys Glu His Gln Pro Asp Val
 100 105 110
 Asp Ser Ser Asn Ile Cys Thr Val Gln Thr His Val Glu Asn Gln Ser
 115 120 125
 Ala Asn Cys Leu Lys Ser Cys Asn Glu Gln Ile Glu Glu Ser Glu Lys
 130 135 140
 His Thr Ala Asn Tyr Asp Thr Glu Glu Arg Val Gly Ser Ser Ser Ser
 145 150 155 160
 Glu Ser Cys Ala Gln Asp Leu Pro Val Leu Val Gly Glu Glu Gly Glu
 165 170 175
 Val Lys Lys Leu Glu Asn Thr Gly Ile Glu Ala Asn Val Leu Cys Leu
 180 185 190
 Glu Ser Glu Ile Ser Glu Asn Ile Leu Glu Lys Gly Gly Asp Pro Leu
 195 200 205
 Glu Lys Gln Asp Gln Ile Ser Gly Leu Ser Gln Ser Glu Val Lys Thr
 210 215 220
 Asp Val Cys Thr Val His Leu Pro Asn Asp Phe Pro Thr Cys Leu Thr
 225 230 235 240
 Ser Glu Ser Lys Val Tyr Gln Pro Val Ser Cys Pro Leu Ser Asp Leu
 245 250 255
 Ser Glu Asn Val Glu Ser Val Val Asn Glu Lys Ile Thr Glu Ser
 260 265 270
 Ser Leu Val Glu Ile Thr Glu His Lys Asp Phe Thr Leu Lys Thr Glu
 275 280 285
 Glu Leu Ile Glu Ser Pro Lys Leu Glu Ser Ser Glu Gly Glu Ile Ile
 290 295 300
 Gln Thr Val Asp Arg Gln Ser Val Lys Ser Pro Glu Val Gln Leu Leu
 305 310 315 320
 Gly His Val Glu Thr Glu Asp Val Glu Ile Ile Ala Thr Cys Asp Thr
 325 330 335
 Phe Gly Asn Glu Asp Phe Asn Asn Ile Gln Asp Ser Glu Asn Asn Leu
 340 345 350
 Leu Lys Asn Asn Leu Leu Asn Thr Lys Leu Glu Lys Ser Leu Glu Glu

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Met Ile Pro Met Glu Cys Asp Ser Phe Cys Ser Asp Gln Asn Glu Ser
      405              410              415
Glu Val Glu Pro Ser Val Asn Ala Asp Leu Lys Gln Met Asn Glu Asn
      420              425              430
Ser Val Thr His Cys Ser Glu Asn Asn Met Pro Ser Ser Asp Leu Ala
      435              440              445
Asp Glu Lys Val Glu Thr Val Ser Gln Pro Ser Glu Ser Pro Lys Asp
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Thr Ile Asp Lys Thr Lys Lys Pro Arg Thr Arg Arg Ser Arg Phe His
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Ser Pro Ser Thr Thr Trp Ser Pro Asn Lys Asp Thr Pro Gln Glu Lys
      485              490              495
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      500              505              510
Arg Lys Ser Gln Ser Pro Ser Pro Lys Asn Glu Ser Ala Arg Gly Arg
      515              520              525
Lys Lys Ser Arg Ser Gln Ser Pro Lys Lys Asp Ile Ala Arg Glu Arg
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Asp Pro Glu Lys Gln Asn Glu Asn Thr Arg Lys Glu Lys Asn Asp Ile
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His Leu Asp Ala Asp Asp Pro Asn Ser Ala Asp Lys His Arg Asn Asp
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Cys Pro Asn Trp Ile Thr Glu Lys Ile Asn Ser Gly Pro Asp Pro Arg
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<211> 597
<212> DNA
<213> Homo Sapiens
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-132-

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<211> 3344

<212> DNA

<213> Homo Sapiens

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gggatgtaaa gaactgagtg gggaaggagg aggtccccc tggatccatc cgtccagcca 3060
agagctcttc atctgctaca agaacatttg aatcttggga ccttttaaaga gcccctccta 3120
acccagcagt aactggaaca cacttgggag cagtctatg tctcagtgcc ccttaaattt 3180
ctgccctgag cctccacgt cagtgccatc ggtctagaac cactaacccc gcattgctgt 3240
tgatcgtcac gctcgcatct atagataacg gctctccaga cctgagcttt ccgcgtcagc 3300
aagtaggaat cgtttttgct gcagagaata aaaggaccac gtgc 3344

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<210> 171

<211> 1004

<212> PRT

<213> Homo Sapiens

<400> 171

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Tyr Ser Cys Ala Ser Ala Gly Ile Gly Ala Ala Gly Pro Trp Arg Gly
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Thr Leu Arg Glu Leu Gly Thr Ala Thr Leu Gly Glu Phe Phe Gly
20     25     30
Val Thr Phe Lys Met Asp Ser Thr Leu Thr Ala Ser Glu Ile Arg Gln
35     40     45
Arg Phe Ile Asp Phe Phe Lys Arg Asn Glu His Thr Tyr Val His Ser
50     55     60
Ser Ala Thr Ile Pro Leu Asp Asp Pro Thr Leu Leu Phe Ala Asn Ala
65     70     75     80
Gly Met Asn Gln Phe Lys Pro Ile Phe Leu Asn Thr Ile Asp Pro Ser
85     90     95
His Pro Met Ala Lys Leu Ser Arg Ala Ala Asn Thr Gln Lys Cys Ile
100    105    110
Arg Ala Gly Gly Lys Gln Asn Asp Leu Asp Asp Val Gly Lys Asp Val
115    120    125
Tyr His His Thr Phe Phe Glu Met Leu Gly Ser Trp Ser Phe Gly Asp
130    135    140
Tyr Phe Lys Glu Leu Ala Cys Lys Met Ala Leu Glu Leu Leu Thr Gln
145    150    155    160
Glu Phe Gly Ile Pro Ile Glu Arg Leu Tyr Val Thr Tyr Phe Gly Gly
165    170    175
Asp Glu Ala Ala Gly Leu Glu Ala Asp Leu Glu Cys Lys Gln Ile Trp
180    185    190
Gln Asn Leu Gly Leu Asp Asp Thr Lys Ile Leu Pro Gly Asn Met Lys
195    200    205
Asp Asn Phe Trp Glu Met Gly Asp Thr Gly Pro Cys Gly Pro Cys Ser
210    215    220
Glu Ile His Tyr Asp Arg Ile Gly Gly Arg Asp Ala Ala His Leu Val
225    230    235    240
Asn Gln Asp Asp Pro Asn Val Leu Glu Ile Trp Asn Leu Val Phe Ile
245    250    255
Gln Tyr Asn Arg Glu Ala Asp Gly Ile Leu Lys Pro Leu Pro Lys Lys
260    265    270

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Ser Ile Asp Thr Gly Met Gly Leu Glu Arg Leu Val Ser Val Leu Gln
 275 280 285
 Asn Lys Met Ser Asn Tyr Asp Thr Asp Leu Phe Val Pro Tyr Phe Glu
 290 295 300
 Ala Ile Gln Lys Gly Thr Gly Ala Arg Pro Tyr Thr Gly Lys Val Gly
 305 310 315 320
 Ala Glu Asp Ala Asp Gly Ile Asp Met Ala Tyr Arg Val Leu Ala Asp
 325 330 335
 His Ala Arg Thr Ile Thr Val Ala Leu Ala Asp Gly Gly Arg Pro Asp
 340 345 350
 Asn Thr Gly Arg Gly Tyr Val Leu Arg Arg Ile Leu Arg Arg Ala Val
 355 360 365
 Arg Tyr Ala His Glu Lys Leu Asn Ala Ser Arg Gly Phe Phe Ala Thr
 370 375 380
 Leu Val Asp Val Val Val Gln Ser Leu Gly Asp Ala Phe Pro Glu Leu
 385 390 395 400
 Lys Lys Asp Pro Asp Met Val Lys Asp Ile Ile Asn Glu Glu Glu Val
 405 410 415
 Gln Phe Leu Lys Thr Leu Ser Arg Gly Arg Arg Ile Leu Asp Arg Lys
 420 425 430
 Ile Gln Ser Leu Gly Asp Ser Lys Thr Ile Pro Gly Asp Thr Ala Trp
 435 440 445
 Leu Leu Tyr Asp Thr Tyr Gly Phe Pro Val Asp Leu Thr Gly Leu Ile
 450 455 460
 Ala Glu Glu Lys Gly Leu Val Val Asp Met Asp Gly Phe Glu Glu Glu
 465 470 475 480
 Arg Lys Leu Ala Gln Leu Lys Ser Gln Gly Lys Gly Ala Gly Gly Glu
 485 490 495
 Asp Leu Ile Met Leu Asp Ile Tyr Ala Ile Glu Glu Leu Arg Ala Arg
 500 505 510
 Gly Leu Glu Val Thr Asp Asp Ser Pro Lys Tyr Asn Tyr His Leu Asp
 515 520 525
 Ser Ser Gly Ser Tyr Val Phe Glu Asn Thr Val Ala Thr Val Met Ala
 530 535 540
 Leu Arg Arg Glu Lys Met Phe Val Glu Glu Val Ser Thr Gly Gln Glu
 545 550 555 560
 Cys Gly Val Val Leu Asp Lys Thr Cys Phe Tyr Ala Glu Gln Gly Gly
 565 570 575
 Gln Ile Tyr Asp Glu Gly Tyr Leu Val Lys Val Asp Asp Ser Ser Glu
 580 585 590
 Asp Lys Thr Glu Phe Thr Val Lys Asn Ala Gln Val Arg Gly Gly Tyr
 595 600 605
 Val Leu His Ile Gly Thr Ile Tyr Gly Asp Leu Lys Val Gly Asp Gln
 610 615 620
 Val Trp Leu Phe Ile Asp Glu Pro Arg Arg Arg Pro Ile Met Ser Asn
 625 630 635 640
 His Thr Ala Thr His Ile Leu Asn Phe Ala Leu Arg Ser Val Leu Gly
 645 650 655
 Glu Ala Asp Gln Lys Gly Ser Leu Val Ala Pro Asp Arg Leu Arg Phe
 660 665 670
 Asp Phe Thr Ala Lys Gly Ala Met Ser Thr Gln Gln Ile Lys Lys Ala
 675 680 685
 Glu Glu Ile Ala Asn Glu Met Ile Glu Ala Ala Lys Ala Val Tyr Thr
 690 695 700
 Gln Asp Cys Pro Leu Ala Ala Ala Lys Ala Ile Gln Gly Leu Arg Ala


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705              710              715              720
Val Phe Asp Glu Thr Tyr Pro Asp Pro Val Arg Val Val Ser Ile Gly
              725              730              735
Val Pro Val Ser Glu Leu Leu Asp Asp Pro Ser Gly Pro Ala Gly Ser
              740              745              750
Leu Thr Ser Val Glu Phe Cys Gly Gly Thr His Leu Arg Asn Ser Ser
              755              760              765
His Ala Gly Ala Phe Val Ile Val Thr Glu Glu Ala Ile Ala Lys Gly
              770              775              780
Ile Arg Arg Ile Val Ala Val Thr Gly Ala Glu Ala Gln Lys Ala Leu
785              790              795              800
Arg Lys Ala Glu Ser Leu Lys Lys Cys Leu Ser Val Met Glu Ala Lys
              805              810              815
Val Lys Ala Gln Thr Ala Pro Asn Lys Asp Val Gln Arg Glu Ile Ala
              820              825              830
Asp Leu Gly Glu Ala Leu Ala Thr Ala Val Ile Pro Gln Trp Gln Lys
              835              840              845
Asp Glu Leu Arg Glu Thr Leu Lys Ser Leu Lys Lys Val Met Asp Asp
              850              855              860
Leu Asp Arg Ala Ser Lys Ala Asp Val Gln Lys Arg Val Leu Glu Lys
865              870              875              880
Thr Lys Gln Phe Ile Asp Ser Asn Pro Asn Gln Pro Leu Val Ile Leu
              885              890              895
Glu Met Glu Ser Gly Ala Ser Ala Lys Ala Leu Asn Glu Ala Leu Lys
              900              905              910
Leu Phe Lys Met His Ser Pro Gln Thr Ser Ala Met Leu Phe Thr Val
              915              920              925
Asp Asn Glu Ala Gly Lys Ile Thr Cys Leu Cys Gln Val Pro Gln Asn
              930              935              940
Ala Ala Asn Arg Gly Leu Lys Ala Ser Glu Trp Val Gln Gln Val Ser
945              950              955              960
Gly Leu Met Asp Gly Lys Gly Gly Gly Lys Asp Val Ser Ala Gln Ala
              965              970              975
Thr Gly Lys Asn Val Gly Cys Leu Gln Glu Ala Leu Gln Leu Ala Thr
              980              985              990
Ser Phe Ala Gln Leu Arg Leu Gly Asp Val Lys Asn
              995              1000

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<210> 172

<211> 659

<212> DNA

<213> Homo Sapiens

<400> 172

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gcctgagcaa cgtctccgag caggcgctgg gctagaggcg ggtctcaacc agctactcat      60
tggaggcggg cttgagagcg gcggccaggg aggtgcggag cagcctcggc ggcggcggcc      120
gaaccaaccg agtcggatcc tgaccctaaa acctagtatt ttccacttgt tcatcaatat      180
ggaaaactca gattccaatg acaaaggaag tggatgatcag tctgcagcac agcgcagaag      240
tcagatggac cgattggatc gagaagaagc tttctatcaa tttgtaaata acctgagtga      300
agaagattat aggcttatga gagataacaa tttgctaggc accccagggtg aaagtactga      360
ggaagagttg ctgagacgac tacagcaaat taaagaaggc ccaccaccgc aaaactcaga      420
tgaaaataga ggaggagact cttcagatga tgtgtcctaat ggtgactcta taatagactg      480
gcttaactct gtcagacaaa ctggaaatac aacaagaagt gggcaaagag gaaaccaatc      540
ttggagagca gtgagtcgga ctaatccaaa cagtgggtga tttcagattc agtttagaga      600
taaattgtaa cccgtaataa tgggagccaa aattcagaga atgaaaatga gccatctgc      659

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<210> 173
 <211> 192
 <212> PRT
 <213> Homo Sapiens

<400> 173
 Pro Glu Gln Arg Leu Arg Ala Gly Ala Gly Leu Glu Ala Gly Leu Asn
 1 5 10 15
 Gln Leu Leu Ile Gly Gly Gly Leu Glu Ser Gly Gly Gln Gly Gly Ala
 20 25 30
 Glu Gln Pro Arg Arg Arg Arg Pro Asn Gln Pro Ser Arg Ile Leu Thr
 35 40 45
 Leu Lys Pro Ser Ile Phe His Leu Phe Ile Asn Met Glu Asn Ser Asp
 50 55 60
 Ser Asn Asp Lys Gly Ser Gly Asp Gln Ser Ala Ala Gln Arg Arg Ser
 65 70 75 80
 Gln Met Asp Arg Leu Asp Arg Glu Glu Ala Phe Tyr Gln Phe Val Asn
 85 90 95
 Asn Leu Ser Glu Glu Asp Tyr Arg Leu Met Arg Asp Asn Asn Leu Leu
 100 105 110
 Gly Thr Pro Gly Glu Ser Thr Glu Glu Glu Leu Leu Arg Arg Leu Gln
 115 120 125
 Gln Ile Lys Glu Gly Pro Pro Pro Gln Asn Ser Asp Glu Asn Arg Gly
 130 135 140
 Gly Asp Ser Ser Asp Asp Val Ser Asn Gly Asp Ser Ile Ile Asp Trp
 145 150 155 160
 Leu Asn Ser Val Arg Gln Thr Gly Asn Thr Thr Arg Ser Gly Gln Arg
 165 170 175
 Gly Asn Gln Ser Trp Arg Ala Val Ser Arg Thr Asn Pro Asn Ser Gly
 180 185 190

<210> 174
 <211> 610
 <212> DNA
 <213> Homo Sapiens

<400> 174
 gtactggcat cagtcaatgt tctggagtga tttgggcccc gatggttggt atgaagctat 60
 tggctctgtg gacagtagtt tgccacacgt tgggtgtttt gcaaaagcaa ctgcacaaga 120
 caaccccaaa tctgccacag agcagtcagg aactgggtatc cgatcagaga gtgagacaga 180
 gtccgaggcc tcagaaatta ctattcctcc cagcaccctc gcagttccac aggcctccgt 240
 ccagggggag gactacggca aaggtgtcat ctctacctc agggacaaag tggctcgtggg 300
 gattgtgcta tggaacatct ttaaccgaat gccaatagca aggaagatca ttaaggacgg 360
 tgagcagcat gaagatctca atgaagtagc caaactattc aacattcatg aagactgaag 420
 cccacagtg gaattggcaa acccactgca gccctgaga ggaggtcgaa tgggtaaagg 480
 agcatttttt tattcagcag actttctctg tgtatgagtg tgaatgatca agtcctttgt 540
 gaatattttc aactatgtag gtaaattctt aatgttcnca tagtgaaata aattctgatt 600
 cttctaaaaa 610

<210> 175
 <211> 138
 <212> PRT
 <213> Homo Sapiens

<400> 175

Tyr Trp His Gln Ser Met Phe Trp Ser Asp Leu Gly Pro Asp Val Gly
 1 5 10 15
 Tyr Glu Ala Ile Gly Leu Val Asp Ser Ser Leu Pro Thr Val Gly Val
 20 25 30
 Phe Ala Lys Ala Thr Ala Gln Asp Asn Pro Lys Ser Ala Thr Glu Gln
 35 40 45
 Ser Gly Thr Gly Ile Arg Ser Glu Ser Glu Thr Glu Ser Glu Ala Ser
 50 55 60
 Glu Ile Thr Ile Pro Pro Ser Thr Pro Ala Val Pro Gln Ala Pro Val
 65 70 75 80
 Gln Gly Glu Asp Tyr Gly Lys Gly Val Ile Phe Tyr Leu Arg Asp Lys
 85 90 95
 Val Val Val Gly Ile Val Leu Trp Asn Ile Phe Asn Arg Met Pro Ile
 100 105 110
 Ala Arg Lys Ile Ile Lys Asp Gly Glu Gln His Glu Asp Leu Asn Glu
 115 120 125
 Val Ala Lys Leu Phe Asn Ile His Glu Asp
 130 135

<210> 176

<211> 805

<212> DNA

<213> Homo Sapiens

<400> 176

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gggacagcca agtctgtgac ttgcacgtac tcccctgccc tcaacaagat gttttgccaa      60
ctggccaaga cctgccctgt gcagctgtgg gttgattcca ccccccgcc cggcaccgc      120
gtccgcgcca tggccatcta caagcagtc cagcacatga cggaggttgt gaggcgtgc      180
ccccaccatg agcgtctgtc agatagcgat ggtctgcccc ctctcagca tcttatccga      240
gtggaaggaa atttgcgtgt ggagtatttg gatgacagaa acacttttcg acatagtgtg      300
gtggtgccct atgagccgcc tgaggttggc tctgactgta ccaccatcca ctacaactac      360
atgtgtaaca gttcctgcat gggcggcatg aaccggaggc ccctcctcac catcatcaca      420
ctggaagact ccagtggtaa tctactggga cggaacagct ttgagggtgcg tgtttgtgcc      480
tgtcctggga gagaccggcg cacagaggaa gagaatctcc gcaagaaagg ggagcctcac      540
cacgaagctg cccccaggga gactaagcg agcactgccc aacaacacca agctcctctc      600
cccagccaaa gaagaaanct ctggatngag aatatttcac cccttcanat tcgttgggcg      660
tgagcgcttc cganaatgtt ccgaagagct gnaagaaggc cttgggaact caaaggatgc      720
ccaaggcttg ggaaaggagc caangggggg gaancaangg gctcaactnc aagccaacct      780
gaaagtcca aaaaanggtt ccagt                                805
  
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<210> 177

<211> 626

<212> DNA

<213> Homo Sapiens

<400> 177

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ctaatttgtc tgtttatttc cacaaggtag ccaggggttg gggcgccgag ccaagcccag      60
caggccatgg gaccttctc cggcggggtg cacgctggat ttctgggtct gccccaccag      120
caggtttgca ggcaggccgt catgagtgcc ggtggaaggc tccgaggggc tgggcagggg      180
ctcggggcgg gccacacact tgtggagcta gaaatantgg ggcaggtcct tctctatcac      240
caggggctcc tccatgggtc cgtagcgctt caccacgcag ccgttcttgt cgatgaggaa      300
ctgtgganan acggtgtcca aactgtgggg ccaccctgc aaggggctga ggctgccctt      360
cctgtccgct gccatctg ggcacggctg tggccagggg aaactggtcc cctaccccc      420
acagccccct tacctttggt gaagttccac ttgatggcac tggaaaanaa gcacatggac      480
gtgagcgtcc ccaggcagcc cccacagtc cccaaagctt gtcctgtctc caaggaggcc      540
  
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anaaaaggttg tnagcttccc ceggtncctc cacangccac agtgecccca aanccccccc 600
 aanagccatc tttaccccaa ggaggg 626

<210> 178
 <211> 793
 <212> DNA
 <213> Homo Sapiens

<400> 178
 gcgcgaggct gctgctgctg cccccggccc gcgcggctgg aaacgggagag gccgagccaa 60
 gcggcggccc ctcttatgct gggaggatgc tggagagtag cggctgcaaa gcgctgaagg 120
 agggcgtgct ggagaagcgc agcgacgggt tgttgagct ctggaagaaa aagtgttgca 180
 tcctcaccga ggaagggctg ctgcttatcc cgcccaagca gctgcaacac cagcagcagc 240
 agcaacagca gcagcagcag cagcaacaac agcccgggca ggggcccggc gagccgtccc 300
 aaccagtggt ccccgctgtc gccagcctcg agccgcccgt caagctcaag gaactgcact 360
 tctccaacat gaagaccgtg gactgtgtgg agcgcaaggg caagtacatg tacttctactg 420
 tgggtgatggc agagggcaag gagatcgact ttcggtgccc gcaagaccag ggctggaacg 480
 ccgagatcac gctgcagatg gtgcagtaca agaatcgta ggccatcctg gcggtcaaat 540
 ccacgcggca gaagcagcag cacctggctc agcancagcc cccctcgag ccgcagccgc 600
 agccgcagct ccaagcccca accccagcct tcagcctcaa gcngcaacc ccaagcccca 660
 attcacaac ccaagccct caagcccaa cccaaagccc tcangcccca ngcaagntcc 720
 aaccggttat ccggccatcc aacattcaan atccaanact ctcaangcct taactnccn 780
 acccaanaac nct 793

<210> 179
 <211> 786
 <212> DNA
 <213> Homo Sapiens

<400> 179
 aatatcagag ttttaatttc aaccagctgg cacaacaatg aaagtgtcag actttctgaa 60
 agtactcgag aaataatgaa taaattctta atgttttccc ctccaccgcc cttttttatt 120
 ctccaagatt aggaattact acggattagg tttttgaaaa taaagtttcc tttttggaaa 180
 atggtctaca ttcagaaatg tcttagaaca agcatttaaa aaaaactaat aaataatcat 240
 aaatcaaaat acattaaaat aaaattacag tacatcatcg ctccatagaaa attcaccata 300
 caagacgatc ctttcaaagg ttcataaata aaagtcttct tgactcgaaa tcgtttcctg 360
 catcgtgatg aaaagtatgc agaaaactaa gaagaatcgc aagttttcag taggggtgatg 420
 tccaaactac ttgatctggt gcggggcgga gagactgttt tgcttttgat ccaagtgaag 480
 acaatagaaa tgtgctcgtc ccacttctc aagtcctcaa aacctgtct tgcccgggag 540
 ctgccccttt cangcagagt tgggaggtgc tgcgganaaa ccggtgcccg tgcggctgcc 600
 aatgcggctg tgggtgtggg tgcngtatgt ggtgccgat gcnggtgccg ggtnaagggtg 660
 tggggtgcca antnaaggat gaaaatgtgg atnttngnat nttgattccg gatacggggt 720
 gggaacctng cngggggccn naaggcttgg ggttggggct naanggctgg ggttttttaa 780
 ttgggg 786

<210> 180
 <211> 791
 <212> DNA
 <213> Homo Sapiens

<400> 180
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 aggaggggat cctgcagctg cgtgcacca actcagccaa gccagtgcca ctggcaccat 120
 cctcatggc ctcttctccg acttctatct gtgtgtgtgg gcaggtgcca gctgggggtg 180
 gagttctgca gtgtgacctg tgtcaggact ggttccatgg gcagtgtgtg tcagtgcacc 240

atctcctcac	ctctccaaag	cccagtctca	cttcatctcc	actgctagcc	tgggtgggaat	300
gggacacaaa	attcctgtgt	ccactgtgta	tgcgctcacg	acggccacgc	ctagagacaa	360
tcctagcctt	gctggttgcc	ctgcagaggc	tgcccgtgcg	gctgcctgag	ggtgaggccc	420
ttcagtgtct	cacagagagg	gccattggct	ggcaagaccg	tgccagaaaag	gctctggcct	480
ctgaagatgt	gactgctctg	ttgcgacagc	tggctgagct	tcgccaacag	ctacaggcca	540
aacccanacc	agaggaggcc	tcagtctaca	cttcagccac	tgccctgtgac	cctatcagag	600
aaggcagtg	caacaatatt	tcnaangtcc	aagggctgct	ggagaatgga	gacantgttg	660
accagtctg	agaacatggc	tccaggaaaag	ggctctgacc	tggagctacn	gtcctcactg	720
ttgccgcaat	ttgactggnc	ctgttttttg	ganctgcctg	aaggcaatcc	cggggctccc	780
cctggaggga	g					791

<210> 181
 <211> 747
 <212> DNA
 <213> Homo Sapiens

<400> 181							
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acaggtagag	tcatagaatt	cttggttt	tttc	cctattcttt	ttggtaatta	caacgtacat	120
tgtcttcttt	tataataaga	cccaaggga		gaaaagaaaa	ggatgtacaa	tgaaggtaga	180
agttttgaag	caacaaaata	ttttatgac	a	gggacaaaaa	aacaaaaaac	aaacaaaaat	240
tgaagtacag	aaagagggtg	gtgggggcaa		aaataaaggt	acgcacttgg	gcttctctca	300
gatttggttg	tccttattca	gactagaatg		aaactgggtt	aggaaatcac	tcctgtatgc	360
tagcaggaat	gttgctggca	agacacttct		gagcatcggg	gtgtggactt	tacgaaccaa	420
ccttttaaca	gtaactctag	gagagaggat		atcaaaaatt	ggcagtgaaa	aattatagat	480
aggcaaaaag	ctccttctga	gggccaggcc		aggagatagt	angatttaag	aaacaaacaa	540
acaataacaa	ccacaaatgg	acctttggtg		ccactgtcac	aactgttgct	ctcagagta	600
ggagaattgt	ancaaaggca	ttaaagaagg		gacaagcaag	ctgaagagcc	tgaatccttg	660
gggttgtaag	ccnatttttg	gnttcttttc		aagaaaaggg	ctgttggnccg	gtggaanggg	720
tcanggaaca	ntatttcacg	ggtcngc					747

<210> 182
 <211> 909
 <212> DNA
 <213> Homo Sapiens

<400> 182						
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acctaggaat	ccaacttaca	aaggatgtga	aggacctctt	caaggagaac	tacaaaccac	120
tgctcaatga	aataaaaagag	gatacaaaca	aatggaagaa	cattccatgc	tcattgggtag	180
gaagaatcaa	tatcgtgaaa	atggccatac	tgcccaagg	aatgtataga	ttcaatgcc	240
tccccatcaa	gctaccaatg	actttcttca	cagaatttga	aaaaactact	caaaagtcca	300
tatggaacca	aaaaagagcc	cacattgcc	agtcaatcct	aagccaaaag	aaacaaagctg	360
gaggcatcac	gctacctgac	ttcaaactat	actacaaggc	tacagtaacc	aaaacagcgt	420
ggtactggta	ccaaaacaga	gatataaatc	aatgcaacag	aacagagccc	tcagaaataa	480
tgccacatat	ctacaactat	ctgatctttg	acaaacctga	gaaaaacaag	caatggggaa	540
aggattccct	atttaataaa	tgggtgctggg	aaaactggct	agccatatgt	agaaagctga	600
aactggatct	cttctttata	ccttatacaa	aaattaattg	aagatggntt	aaaggactta	660
aacgttagac	ctaaaaccat	aaaaacccta	gaagaaaaac	ctaggcatta	ccattcangg	720
acataggctt	gggcaaggac	ttcctgtcta	aaacaccaan	agcaatggga	ncaaaagcca	780
aaattgcaaa	tggggattct	aattaactaa	agggcttttg	cacagcnaag	aagctccatc	840
agagngaaca	ggaacntcaa	antgggagaa	attttgaacc	taccatcnga	naaggcta	900
nccagaatc						909

<210> 183

<211> 708
 <212> DNA
 <213> Homo Sapiens

<400> 183
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 gtatacatgt gccatgctgg tgtgctgcac ccattaactc gttatttagc attaggtata 120
 tctcctaagt ctatccctcc cgctccccc caccacacaa cagtccccag agtgtgatgt 180
 tccccctcct gtgtccatgt gttctcactg ttcaattccc acctatgagt gagaatatgc 240
 ggtgttttggg ttttttgtcc ttgccatagt ttactgagaa tgatgatttc caatttcac 300
 cctgtcccta caaaggacat gaactcatca ttttttatgg ctgcatagta ttccatgggtg 360
 tatatgtgcc acatttttctt aatccagtct atcattgttg gccatttggg ttggttccaa 420
 gtcttttgcta ttgtgaatac tgccgcaata aacatacgtg tgcatgtgtc tttatagcag 480
 catgatttat antccttttg gtatatactc agtaatggga tggctgggtc aaatgggnatt 540
 ccaantccan atcccttang aattgccaca cggactccac aanggttgaa ctantttaca 600
 gtccancaa cagngtnaaa gggtcnaaan tcnccaaaat cctctccaag caccngttgt 660
 tcccgactt tttaanggat tgncaattcc aaccggngt caaaaggg 708

<210> 184
 <211> 855
 <212> DNA
 <213> Homo Sapiens

<400> 184
 agactcacag tctgctggtg ggcagagaag acagaaacga catgagcaca gcaggaaaag 60
 taatcaaatg caaagcagct gtgctatggg aggtaaagaa acccttttcc attgaggatg 120
 tggaggttgc acctcctaag gcttatgaag ttgcattaa gatggtggct gtaggaatct 180
 gtcgcacaga tgaccacgtg gttagtggca acctggtgac cccccctcct gtgatttttag 240
 gccatgaggc agccggcatc gtggagagtg ttggagaagg ggtgactaca gtcaaacacg 300
 gtgataaagt cateccgctc tttactcctc agtgtggaaa atgcagagtt tgtaaaaacc 360
 cggagagcaa ctactgcttg aaaaatgatc taggcaatcc tcgggggacc ctgcaggatg 420
 gcaccaggag gttcacctgc agggggaagc ccattcacca ctcccttggc accagcacct 480
 tctcccagta caggttggtg gatgagaatg cagtggccaa aattgatgca gcctcgcccc 540
 tggagaaagt ctgcctcatt ggctgtggat tctcgactgg gttatgggtc tgcagttaac 600
 gttgccaaag tcaccccagg ctctacctgt gctgtgtgtg gcctgggaag ggtcggccta 660
 tctgctgtta tgggctgtta aagcaactgg aggcancag aatcaattgc ggtggacatc 720
 aacaaggaca aatttttgcaa agggcaaaaag agttgggtgc cactgaatgc catcaaccct 780
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<210> 185
 <211> 865
 <212> DNA
 <213> Homo Sapiens

<400> 185
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 tggcttacgc aaacatgtgt cgatgtctag taacgctgaa agtacctatg gcagacaagc 180
 ctggtaacac agtgaatttc cggaagctgc tactgaaccg ttgccagaag gagtttgaaa 240
 aagataaagc agatgatgat gtctttgaga agaagcagaa agaacttgag gctgccagtg 300
 ctccagagga gaggacaagg ctccatgatg aactggaaga agccaaggac aaagcccggc 360
 ggagatccat tggcaacatc aagtttattg gagaactcct taaactcaaa atgctgactg 420
 aagccatcat gcatgactgt gtgggtgaagc tgctaaagaa ccatgatgaa gaatccctgg 480
 agtgccctgtg tcgcctgctc accaccattg gcaaagactt ggactttgaa aaagcaaagc 540

cacgtatgga	ccagtacttt	aatcaagatg	gagaaaattg	tnaaagaaag	aaaaacctca	600
tctagggatt	cggttcatgc	ttcaaagatg	ttatanacct	aaggctgttg	caattggggg	660
atctcgaaaag	agcagatnaa	gggcctnaan	ctatcgaaaca	gattcacaaa	ganggctaaa	720
attgaaanaa	caagaatagc	caaagggaag	gnccaacaac	tcatggacca	anggagaaat	780
agaataccaa	ggtgttccaa	aaanttggcc	aaangnnggt	tggaanacn	gttcaaaggg	840
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<210> 186

<211> 736

<212> DNA

<213> Homo Sapiens

<400> 186

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ccacagcatt	tccttctgtt	tcaatgttat	gtatgttttg	attactattg	tgatttttta	180
aattttctga	agcaagctga	gaggcaggca	gaaagatttg	atgccaaaaa	aaaaaaaaatc	240
tttcttacct	tggtcacccc	aaactttctc	aaatctggac	taaatgctat	accttaaaac	300
aaacatgagg	tgcatcttga	aggggagggg	aattttatttc	tctgcttttc	tattatacaa	360
gttgtttaca	gaaactgcaa	attaaaaaat	tacactggca	tttgagtcct	ttaaaataaa	420
ttaaaagttc	tcaacttttt	tttttttttg	ctaaacattt	ttttaagtat	gagtccttgt	480
ttaaaaagaa	aagattaaaa	cagaaaaatg	tttctataaa	taatacatgt	attttggttt	540
tagtgctccc	gccctaaggt	ttgaagttaa	cttttancca	ngtacctttt	tcctccatga	600
tcaccttttt	ttctctttcc	cctctcccaa	ntccgtgcac	acgtgggggt	ttccggcaan	660
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tacttaaaat	tgggtt					736

<210> 187

<211> 946

<212> DNA

<213> Homo Sapiens

<400> 187

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tccggttggg	gcatgacgtg	aacatccagt	ttcctgataa	ggacgatggg	aaccagcccc	180
aggaccaa	taccatcaca	gggtacgaaa	agaacacaga	agctgccagg	gatgctatac	240
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ttcacgccc	catcattggg	gcccgcggca	aagccattcg	caaaatcatg	gacgaattca	360
aggtggacat	tcgcttccca	cagagcggag	cccagaccc	caactgcgtc	actgtgacgg	420
ggctcccaga	gaatgtggag	gaagccatcg	accacatcct	caatctggag	gaggaatacg	480
tgagtctctg	tgggccttgg	agccctgagg	cgcctggcca	cgtccaccgg	cctgaggccc	540
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ggtgagcaag	cnggcgggat	gctgggggtg	ctggggcaaa	ctgaccctgt	cttctgtctt	660
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cccccagcac	acgaanaagc	caanggnacc	tttcaaaagg	ctttnttggg	gccgggacca	780
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<210> 188

<211> 802

<212> DNA

<213> Homo Sapiens

<400> 188

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ggagtcngtt	atcntaacac	gaatgccan	gaccttggt	taatgttaa	cantggagca	180
ngtcctganc	gggcacggcc	angcctggag	gancggccgc	acacacahcc	angcgcnagg	240
ctccctgcgg	gacctcngga	agggggaana	gcgtcaacaa	tttacggngg	gtccaaccgc	300
tgggtcaaat	tgagacaaac	cantgtgtgg	ttgggttcgg	gtcancangc	tggananggt	360
tcngttcntt	ttgatcanta	ncntttgggg	ccccaaggga	nggtcntggg	anccacctga	420
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gcggtccaag	gtgcgtcccg	caccacaaag	cctctggaag	gngccntggc	ctcttcctgt	540
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ctgaaanccn	cctggngctgg	ggccntcaaa	ggcgttgga	ncttccanag	gncnccccca	780
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<210> 189

<211> 807

<212> DNA

<213> Homo Sapiens

<400> 189

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tgcatctcta	tcgtaaccgg	gcgcggggga	gcgcagatcg	gcgccagca	atcacagaag	180
ccgacaaggc	gttcaagcga	aaacatgacc	gctgagccca	tgagtgaag	caagttgaat	240
acattgggtgc	agaagcttca	tgacttcctt	gcacactcat	cagaagaatc	tgaagaaaca	300
agttctcttc	cacgacttgc	aatgaatcaa	aacacagata	aaatcagtgg	ttctggaagt	360
aactctgata	tgatggaaaa	cagcaaggaa	gagggaaacta	gctcttcaga	aaaatccaag	420
tcttcaggat	cgtcacgac	aaagaggaaa	ccttcaattg	taacaaagta	tgtagaatca	480
gatgatgaaa	aacctttgga	tgatgaaact	gtaaatgaag	atgcgtctaa	tgaaaattca	540
gaaaatgata	ttactatgca	nagcttgcca	aaaggtacag	tgattgttca	gccagagcca	600
gtgctgaatg	aagacaaaaga	tgattttaaa	ggggcctgaa	tttagaagca	gaagttaaaa	660
tgaaaactga	naatctcaaa	aaacgccgga	gaanatgggc	ttcatgggga	ttgtgangcc	720
tgcaactggcn	tgggtggacaa	caaggtcaat	caatttcaaa	aaggttccat	ttatagacaa	780
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<210> 190

<211> 608

<212> DNA

<213> Homo Sapiens

<400> 190

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agattggctt	taattttcttc	taaaagcacc	ttcttgga	ttctattctc	aggatcattg	120
tcgtcatcat	catcatecac	tgtgacaggc	actgatttag	ataaggcttc	atctcctgaa	180
gattggcaaa	atccagtatg	tgaagacagc	actaaatttt	cagtcacagg	cttaattttc	240
tgttcatcgc	tgcttccctc	acctatagaa	ttctgatcat	catcttctat	atcagaagaa	300
gatgaggatg	taatgtcagc	ttgcttccct	ttagtgcctg	ttcttaggga	gtttctcttt	360
ttctccttga	caatgactgc	cttcttttta	gatgaagtgc	tttgcttctt	ctttttacta	420
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tccttgaa						608

<210> 191
 <211> 786
 <212> DNA
 <213> Homo Sapiens

<400> 191
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 ttatgagaaa agtgaagttt tatgatgaaa acacaaggca gtggtggatg cgggataccg 180
 gaggagctaa catcccagct ctgaatgagc tgctgtctgt gtggaacatg ggggttcagcg 240
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 atcagattcc agctgagggt ggaggccgga ttgtactgta tggggactcc aattgcttgg 480
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 cgtatgggggt gacaccgcct agcctcagtc actctgggaa ccgccagcgc cctcccantt 600
 ggagcaagct cagtcactcc agagaggatg gaaggaaacc atctcatcgg tactccaagg 660
 ttctggangg ccatttggga aaacccaaac ctcggtctcn acaaccctgt ccangcctgt 720
 nctgggceaa gccaanagcc tttaaaccan aacggngccc aattaaccct ttggaaaaca 780
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<210> 192
 <211> 819
 <212> DNA
 <213> Homo Sapiens

<400> 192
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 cagattttgtg catgtttcct tcaaattctca gtctgtactg tcattaaaaa gatcatggaa 180
 tctatgttgt tctcatgat ggaatagtaa aaaaactgca ttccactgac aaaaaaata 240
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 atccttcccc tgcagtcaga agaccccaga cagcctttcc agttctcccg agtctttggg 420
 ggcacacagct gccggcggga agtctcactg ggcgcagagc cactaagtcc ctctgacgg 480
 gatccacagg aatcttctcg atgtaccagg agcctctgcc catcacagga gggcaggccc 540
 atgtagaaca agactctaac aaacctgcag ctggaaactg gattcctttt aaaccaaccc 600
 gccaacacag ctcggnctac ccaccanccg cgtccgtnaa aggggctctc tgggcctcac 660
 gggctagcca ggttgccggg cacaccgaaa ggggtccttg ggcgggtgaa cctgctgcat 720
 gaanctggcg gggngcttca accctgggct tctcgggct ttcggcctgg nctgggcct 780
 tggtgaantt gntccacaaa agaaaggcca ggagcaaca 819

<210> 193
 <211> 744
 <212> DNA
 <213> Homo Sapiens

<400> 193
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 ctgcagtgca gcagccctct acccaggttc caccttcagt tattcagcag ggtgctcctc 180
 catcttcgca agtggttcca cctgctcaaa ctgggattat tcatcaggga gttcaacta 240
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 cagtiagtct tttgccctct gctagtagta tttctgttac aagtcagggt agttcaactg 420

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acaatcatta	gttcaggcaa	ttggaagcca	aattgaagat	gccaggcggt	gcagcggagc	660
cctccttaag	ttggcttacc	tcaagactaa	tcagttggtg	acaattgggg	ggaatgttca	720
gcaagtttca	agattgggaa	gtta				744

<210> 194
 <211> 567
 <212> DNA
 <213> Homo Sapiens

<400> 194						
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ttacaattgt	gtagagaaca	tgcacagaaa	catatgcata	taactactat	acaggtgata	120
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gtgggtttttg	tcatgtagca	gttttttatgt	agatcnatat	ntaaaagtcc	acacctcttc	360
agacangcca	atgaaacnac	taaatttcaa	tctgtacaan	ctaaatagta	attacagtcc	420
tctangtgnn	caangatact	tacaccacat	anacaaatnt	acnntacgca	naacaacctt	480
catgggggaag	gatagcccta	ggtccccagc	tancctgtca	ccatttttgt	cactctcata	540
gttttggtgt	ccaatccatt	ggtttttg				567

<210> 195
 <211> 771
 <212> DNA
 <213> Homo Sapiens

<400> 195						
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tagttgacaa	tgcatacagc	tgtgatccaa	ggataaaaaa	gttcaaggaa	gaagaaaaag	120
ccaagaaaga	ancanaaaaag	aaagcaaaaag	cagaagctaa	acggaaggag	caagaagcta	180
aagaaaaaca	aagacaagct	gaattagaag	ctgctcggtt	agctaaggag	aaagaagagg	240
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ttaagaagga	aaggcaaaaa	tttcgaaaact	catgcaagac	ctggaatcat	ttttctgata	360
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tcctgttncc	tgttggaaaca	aantcaagat	gggaagttat	tgccaantac	atgaacatac	720
attcctcccn	cngggngtcc	aaaaagaaac	tgccaaaagn	atgtttattg	g	771

<210> 196
 <211> 561
 <212> DNA
 <213> Homo Sapiens

<400> 196						
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ctacttgcac	tcagcacttg	ttcttgagca	gctttctttg	cttttaccat	ctcgacaagt	120
tccttgtatc	gtttcatgca	gtccttcttt	gtcctgccag	gcaccgcttc	tgctattttt	180
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gcgttgctctg	cttgaggtag	cactccatgt	tcttttttga	acttatcaaa	tgctttttta	360
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tctttggnan	gttcttttga	ctccaagagg	aagaangtnt	ngttcatgtn	antangan	480
aacgtcccat	ctggaanttt	tgttcnacca	gggaacanac	tcacaagctt	taactaagta	540
antgtngnat	naccgncngn	c				561

<210> 197

<211> 691

<212> DNA

<213> Homo Sapiens

<400> 197

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cgcagcctca	gccccagcag	cctccacccc	cacccctcc	ccagcagcag	cccccgctgt	120
cacagtgtan	tatgaataac	agtttcaccc	cagctcctat	gatcatggag	ataccagaat	180
ctggaagcac	tgggaacata	agtatctatg	agaggattcc	aggggatttt	ggtgccggca	240
gctactctca	accatcagcc	accttcagcc	tagccaagct	gcagcagctg	accaacacca	300
ttatggaccc	tcatgccatg	ccttatagcc	attctcctgc	tgtgacttcc	tatgcaacca	360
gtgtttctct	gtccaataca	ggactggctc	agctggctcc	atctcatccc	ttagctggga	420
ctcctcaagc	acangccacc	atgacgccac	ccccaaactt	ggcatccact	accatgaacc	480
tcacatctcc	tctgtctcag	tgcaacatgt	ctgccaccaa	cattggcatt	cctcacacgc	540
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ggcactgccc	tctgcngctg	ctcaccanna	ngcagctggg	atgggcccgn	tccccaatcg	660
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<210> 198

<211> 646

<212> DNA

<213> Homo Sapiens

<400> 198

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caccaggtgg	taaancaaca	aagnggttaa	gnctccnctt	tttggattgt	taattgncca	600
tcctcnatcc	ctccaaaagg	gctgggattt	ggatttggca	aagtca		646

<210> 199

<211> 811

<212> DNA

<213> Homo Sapiens

<400> 199

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gatgaaatta	tttctaagac	aaagcaagta	attcaggggc	tggaaagctt	gaagaatgag	180
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gagaagcaga	aactgcgtgc	gcaggttcgt	cgtctgtgcc	aggagaaatca	gtggctacgg	420
gatgaactgg	ccaacacgca	gcagaaactg	cagaagagt	agcagtctgt	ggctcaactg	480
gaggaggaga	agaagcatct	ggagtttatg	aatcagctaa	aaaaatatga	tgacgacatt	540
tccccatccg	aggacaaaga	cactgattct	accaaagagc	ctctggatga	ccttttcccc	600
aatgatgaag	acgacccagg	gcaagggaatc	cagcagcagc	acagcagtgc	agccgcggct	660
gcccagcaag	gcnctacna	agattcccgc	gcggctgcgg	acgtccaca	acctgggtga	720
ttcagttcgc	ctcnnccang	ggccgctacc	aaggtaacct	gttgccccct	cctggcaaa	780
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<210> 200

<211> 763

<212> DNA

<213> Homo Sapiens

<400> 200

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agttcacaga	gaggtgcagc	tctgacaaga	tcctagaggc	tgctagacac	agcgggcagc	180
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gtcacgggcg	gctaggccat	gggacgctga	gcaagtcagt	taaccagccc	gagcttcatt	300
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ctctcacggc	tcctgcgctt	ctccatgttc	tcagggtcat	tgagcacttc	tgccaccctc	420
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tctgcagctt	caaatttgcc	ttgacgtctg	taaagtgcgc	caagggtttt	tagagtgggt	540
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tgccccatcc	ttttgctttc	ctttgcattc	ttctctttcc	tcaacaatgc	atccaaatgg	660
gtttaatttc	aacatctaca	gaaccaaact	ccctttcatg	tgacacaagt	agaatcnctt	720
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<210> 201

<211> 717

<212> DNA

<213> Homo Sapiens

<400> 201

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agaatganca	caattccatt	ttacaaagtt	tgctggagac	actgaagtgt	ttgaagaaag	180
atgatgaaag	taatttggtg	gaggagaaat	caaacatgat	ccggaagtca	ctggagatgt	240
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tggagtcgga	gaagcagaaa	ctgcgtgcgc	aggttcgtcg	tctgtgccag	gagaatcagt	360
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ttgcagccgc	ggctgcccga	gcaaggcgcc	tacgagattc	ccgccgcggc	tgccggacgc	660
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<210> 202

<211> 647

<212> DNA

<213> Homo Sapiens

<400> 202

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caagattagt	agagaaaagc	agaatgccca	aatttcacac	acagactaca	cagcaaattgc	120
tactggggca	tatcctaggg	agacccggag	tccgagcggg	gccccaggg	ctctaagtac	180
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catgccattg	caacaacacc	ttgtgtgaca	cttaactacc	tgttaccaa	gtgaacagct	300
aatcgctctt	aattttttaa	ctcgtgtatt	acacagtaaa	tggattttan	taatacagtt	360
tatattacta	agtacatata	tggcaaagct	acatgtatac	agaaatcagg	aaccccccca	420
aaaaggacag	cagcaccgaa	aggaatggcc	agttcacaga	nanagtgcagc	tctgacaaga	480
tcctagangc	tgctagacac	agcgggcagc	actggganaa	gagaagggaa	gctgcggggag	540
gcgccaaccc	gtcatgccag	gggacagtgt	ganagtcacg	ggncggggcta	ngccaatggg	600
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<210> 203

<211> 786

<212> DNA

<213> Homo Sapiens

<400> 203

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tggaggagga	gcagcaggcc	ctccagaaga	agctgaaggg	gacagaggat	gaggtggaaa	180
agtattctga	atccgtgaag	gaggcccagg	agaaactgga	gcaggccgag	aagaaggcca	240
ctgatgctga	ggcagatgtg	gcctccctga	accgcgcgat	tcagctgggt	gaggaggagc	300
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attaatatga	agaggagatn	aaactgtttg	anggagaagc	tgaanggagg	ctganacccc	720
aagcaaaagt	ttgccnaaaa	ggtctgtggg	caaaaatttg	ggngaaaaac	catcnaatga	780
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<210> 204

<211> 738

<212> DNA

<213> Homo Sapiens

<400> 204

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cgttctctc	cttggcactg	gccaaggctc	cttctaggtc	atcgatgggt	ttctccaact	180
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tctcggccac	ctcagccctc	tcctccgagc	gctccagctc	tccttcagag	atcaccagct	420
tcctggccac	ctcttcatat	ttgcggtctg	aatectcagc	gatgtgcttg	gcctccttca	480
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tanccaangc	gctcctgggc	ccggtcaanc	tcctcctcaa	caagctgaat	gcggcggttc	660
aaggaaggca	anatctgcct	caacaacaat	tggccttctt	cncggccngc	tccaattttc	720
nccnggggcc	tccttcaa					738

<210> 205

<211> 818

<212> DNA

<213> Homo Sapiens

<400> 205

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gttctcctcc	ttggcactgg	ccaaggtctc	ttctaggtca	tcgatggttt	tctccaactt	180
tgccacagac	ctctcggcaa	actctgctcg	ggtctcagcc	tccttcagct	tctcctccaa	240
cagtttgatc	tcctcttcat	atttatcttc	tttgggtggaa	tactcctcct	ctgaggccat	300
cagggacttg	agggcctggt	ccatgggttcg	aagttcctcc	tccagctgtc	tggctcggct	360
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cctggccacc	tcttcatatt	tgcggtctga	atcctcagcg	atgtgcttgg	cctccttcag	480
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tcattcctct	ctcggctctc	atcagccgcc	ttctcgggct	cntccaagct	tctgcaaggc	600
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gagggtttca	nggaagggcc	aaaatctggc	ctnnagnatc	aattggcttt	cttnncggg	720
nctngcncca	attttctccn	ggggcctncc	tttcangggg	tnaagaanaa	atttcaaatt	780
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<210> 206

<211> 927

<212> DNA

<213> Homo Sapiens

<400> 206

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tcgaccgcgc	cgagcaggcc	gaagccgaca	agaagcaagc	tgaggaccgc	tgcaagcagc	120
tggaggagga	gcagcaggcc	ctccagaaga	agctgaaggg	gacagaggat	gaggtggaaa	180
agtattctga	atccgtgaag	gagggcccagg	agaaactgga	gcaggccgag	aagaaggcca	240
ctgatgctga	ggcagatgtg	gcctccctga	accgccgcct	tcagctgggt	gaggaggagc	300
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cggctgatga	gagcgagaga	ggaatgaagg	tcctcgaaaa	ccggggccatg	aaggatgagg	420
agaagatgga	actgcaggag	atgcagctga	aggaggccaa	gcacatcgct	gaggattcag	480
accgcaaata	tgaagaggtg	gccagggaagc	tggatgacct	ggaaggagag	ctggagcgct	540
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ccatggacca	ggccctcaag	tccttgatgg	cctcagagga	ggagtattcc	accaaagaag	660
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ccttggccag	tgccaaggag	gagaacgtcg	agattcacca	gaccttggac	cagaccctgc	840
tggaactcaa	caacctgtga	gggccagccc	caccccagc	caggctatgg	ttgccacccc	900
aacccaataa	aactgatgtt	actagcc				927

<210> 207

<211> 910

<212> DNA

<213> Homo Sapiens

<400> 207

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cagaacataa	attattagga	aacattaaaa	atgtggccaa	gacagctaac	aaggaccact	180
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gtaaagtgtc	tgagcaagta	aaaaatgtga	agcttaatga	agataaaccc	aaagaaacca	300
agtctgaaga	gaccctggat	gagggctccac	caaaatatac	ttaatctgtt	ctgaaaaagg	360
gagataaaac	caactttccc	aaaaaggagg	atgttggttca	ctgctggtat	acaggaacac	420
tacaagatgg	gactgttttt	gatactaata	ttcaaacaag	tgcaaagaag	aagaaaaatg	480

ccaagccttt	aagttttaag	gtcggagtag	gcaaagttat	cagaggatgg	gatgaagctc	540
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gaaagaaaag	acagcctgat	gccaaaattc	caccaaagtc	aaaactcact	tttgaagtgg	660
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taaaacntgg	ncttgaaaga	aaattttcaca	actagttttag	aaacttggtta	ccaaatggta	780
aaggaaaaag	tcaactggga	aaaatttcaag	ggngtttaana	aaaanttggt	ttacctgggg	840
cccaagcctt	ttngngaaaaa	aaaanccctt	tatgaaancc	ccngggccca	aaaanacttt	900
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<210> 208

<211> 745

<212> DNA

<213> Homo Sapiens

<400> 208

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gggattttatc	tctcaaaaagc	tgggaccaag	taaacaaatt	ttattaactc	cttgaatttt	180
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ggggctcnctt	canaactggg	tttccctggg	gtttaacctt	cattnagcct	canaattttt	720
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<210> 209

<211> 965

<212> DNA

<213> Homo Sapiens

<400> 209

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cagaacataa	attattagga	aacattaaaa	atgtggccaa	gacagctaac	aaggaccact	180
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agtctgaaga	gaccctggat	gagggtccac	caaaatatac	taaatctgtt	ctgaaaaagg	360
gagataaaaac	caacttttccc	aaaaaggagg	atgttggttca	ctgctggtat	acaggaacac	420
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ggncccagcc	ttttgagaga	taaatccctt	angaaancc	ggtcnnaaaa	tactttccta	900
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<210> 210

<211> 867

<212> DNA

<213> Homo Sapiens

<400> 210

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taagggattt	atctctcaaa	agctgggacc	aagtaaacia	attttattaa	ctccttgaat	180
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gctgtccttt	ctttccgtaa	gcccattctg	gttcaatctc	cagtcgagcc	ttttctcctt	420
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nccttangtt	ttaaaaaaaa	tgggttataa	gggctggtaa	ccnaagggtg	ggccttgggt	840
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<210> 211

<211> 972

<212> DNA

<213> Homo Sapiens

<400> 211

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cagaacataa	attattagga	aacattaaaa	atgtggccaa	gacagctaac	aaggaccact	180
tggttacagc	ctataaccat	ctttttgaaa	ctaagcgttt	taagggtact	gaaagtataa	240
gtaaagtgtc	tgagcaagta	aaaaatgtga	agcttaatga	agataaaccc	aaagaaacca	300
agtctgaaga	gaccctggat	gagggtccac	caaaatatac	taaatctgtt	ctgaaaaagg	360
gagataaaac	caactttccc	aaaaagggag	atgttggttca	ctgctgggat	acaggaacac	420
tacaagatgg	gactgttttt	gatactaata	ttcaaacaag	tgcaaagaag	aagaaaaatg	480
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gaaagaaagg	acagcctgat	gccaaaatc	caccaaagtc	aaaactcact	tttgaagtgg	660
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<210> 212

<211> 817

<212> DNA

<213> Homo Sapiens

<400> 212

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tctcgcaaag	agcgggaagc	tgagcttggg	gccaaagcca	aggaattcac	caatgtttat	180
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<210> 213

<211> 756

<212> DNA

<213> Homo Sapiens

<400> 213

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ggcactttat	gatacttttt	ctgcttttgg	aaacatactg	tcttgcaagg	tgggtgtgtga	180
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agcagagtta	aaacggaaat	ttgaacagtt	gaaacaggag	agaattagtc	gatatcangg	660
ggtgaatccc	cacattaaga	acttggtatg	cactattgat	gatgaagaaa	attaaggaaa	720
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<210> 214

<211> 728

<212> DNA

<213> Homo Sapiens

<400> 214

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cagaacccaa	agaacatatt	cgtataattg	aaaaattcta	ggtgcttcat	aattgacctt	180
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gccctgcaca	tggaccgcaa	ggctgggggtg	cctgcaaaaan	gctgtatggc	aaggatgaag	660
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<210> 215

<211> 710

<212> DNA

<213> Homo Sapiens

<400> 215

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canaacccaa	agaacatatt	cgtataattg	aaaaattcta	ggtgcttcan	aattgacctt	180
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acaagctagg	aagtcttcaa	accttgagtt	gaattccana	aggggttatt	tggcttttga	300
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ctgcccctgc	acaatggacc	gcaaggctgg	gggggtgcctg	canaaggctg	tttgggcaag	660
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<210> 216

<211> 824

<212> DNA

<213> Homo Sapiens

<400> 216

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aatccaaaag	gctttgggct	ttgtgagtn	acgaaaaaca	cnaggatgcc	aataaggctg	720
ttggaaagaa	atgaatggga	aaagaaataa	antggtaaaa	tcataatttg	tagggccgtn	780
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<210> 217

<211> 749

<212> DNA

<213> Homo Sapiens

<400> 217

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<210> 218
 <211> 600
 <212> DNA
 <213> Homo Sapiens

<400> 218
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 anatttgaat gcattgtttg ggatgangtg ggggaanaagc gttctcncag cannngcctt 540
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<210> 219
 <211> 1077
 <212> DNA
 <213> Homo Sapiens

<400> 219
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 gctattcagt cagtttggtg agaccctaag tgtcaagggt atgagagatc ccaatgggaa 660
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 attaaggaaa gaattttctc cttttggatc aattaccagt gctaaggtaa tgctggagga 960
 tggaagaagc aaagggtttg gcttcgtctg cttctcatct cctgaagaan caaccaagc 1020
 agtcactgga gatgaatgga cgcatttttg ggctccaacc actatatgtt gcctctgg 1077

<210> 220
 <211> 1007
 <212> DNA
 <213> Homo Sapiens

<400> 220
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 tctgtcacc ttccctacag cctgaggagt acatggccta cgttcagagg caagccgact 180
 caaagcagta tggagataaa atcatagagg agctgcaaga tctaggcccc caagtgtgga 240
 gtgagaccaa gtctgggggtg gcaccccaaa agatggcagg tgcgagcccg accaaggatg 300
 acagtaagga ctacagatttc tggaagatgc ttaatgagcc agaggaccag gccccaggag 360
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gtgatccaga	acggcagaga	gagatggaag	aagaggagga	tgaggatgag	gatgaggatg	660
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aagactggag	ggaaaaacaa	gagttccaaa	ncctggtgaa	nnaagcncat	aaaaaagaag	960
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<210> 221

<211> 833

<212> DNA

<213> Homo Sapiens

<400> 221

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caggagggga	ggaggtgccg	gctgaggagc	aggacccaag	ccctgaggca	gcagattcag	240
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cggatttgat	tcgattcata	gaggagctga	aaggtggaac	aaaaaagggg	aagccaaata	360
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aaaggggtga	tccagaacgg	cagagagaga	tggaagaaga	ggaggatgag	gatgaggatg	480
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attaaaaaga	ctggagggaa	aaacaagagt	tccaaanctt	ggtgaannaa	gcncataaaa	780
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<210> 222

<211> 745

<212> DNA

<213> Homo Sapiens

<400> 222

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caacagaggt	gaaggctcct	caactcagaa	gcacaaattg	taggggacag	ggtgggcagg	180
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cactaagggc	aggtgggggc	ctgcttgctc	agtgcctgct	aagtgtcctg	ccctccttgc	300
tctctctacc	cacctccact	caaaagatcc	tactgaatct	ccaggtaggc	agcagggaat	360
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gcagcaagca	ttcaccacag	gccccacac	ccacagagtt	gcccagagang	tccacaagct	540
cagctccact	ctgctgtttg	gccctcaagg	gttcagggtg	ggggaagtgg	ggaagaggca	600
ngccagtcca	ggaagatctg	gattccgtga	angggtaag	tgtagtgttg	gtctcagaag	660
tcaaattntc	caagtcacct	gttgccctcc	ccacctggag	aagccccana	cccgngngta	720
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<210> 223

<211> 747

<212> DNA

<213> Homo Sapiens

<400> 223

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gtgagaccaa	gtctgggggtg	gcaccccaaa	agatggcagg	tgcgagcccg	accaaggatg	300
acagtaagga	ctcagatttc	tggaagatgc	ttaatgagcc	agaggaccag	gccccaggag	360
gggaggaggt	gccggctgag	gagcaggacc	caagccctga	ggcagcagat	tcagcttctg	420
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tgattcgatt	catagaggag	ctgaaagggtg	gaacaaaaaa	ggggaagcca	aatataggcc	540
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atgaaagann	aaggatgaaa	cgggcaagtt	actgggggaan	aattttgana	aagggaactg	720
ggaaagggat	tcctggcttt	ccgttca				747

<210> 224

<211> 618

<212> DNA

<213> Homo Sapiens

<400> 224

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gaggtgaagg	ctcctcaact	cagaagcaca	aattgtaggg	gacaggggtg	gcagggaaag	180
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ancctccan	ctgccngttt	ggccctcaag	gggttccaan	gttcngnaaa	gtggggggagg	600
aaggcanccc	antcccag					618

<210> 225

<211> 765

<212> DNA

<213> Homo Sapiens

<400> 225

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tcagtgtagt	aggaccttc	agggcagctc	agatctcatc	agacatcagg	taactcatac	180
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<210> 226
 <211> 791
 <212> DNA
 <213> Homo Sapiens

<400> 226
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 tgcaacgtcc ctgaacacca taacttagag aatgaagttt ctagattaga agacataatg 180
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 caaanctgat cagcagctaa gatcgctcca agctgatgca aaaggatttg gancancaca 720
 angatcaagc aagaagaaat cttgaaaaga aattaacnaa aatttntnca gcaaaagact 780
 cagacttcaa a 791

<210> 227
 <211> 687
 <212> DNA
 <213> Homo Sapiens

<400> 227
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 aaaaaaaagg ctcagccaca tgttggttta aattcccata tgcaactatt cccatatgta 240
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<210> 228
 <211> 810
 <212> DNA
 <213> Homo Sapiens

<400> 228
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<210> 229

<211> 552

<212> DNA

<213> Homo Sapiens

<400> 229

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ctgtgcggaa	gctctttagt	tttaattagat	cccatttgtc	aatttcggct	tttgttgccca	180
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tagccagttt	tcccancacc	atattattaaa	tagggaaatcc	tttccccant	tcctgttttt	420
gtcangtttg	tcaaagatca	natggctgta	natatgcanc	attatttccg	agggctctgt	480
tengttccat	tggtctacat	ttcogttttg	gttcnngtac	catgctgttt	tttgttacng	540
gtanaccttg	gt					552

<210> 230

<211> 842

<212> DNA

<213> Homo Sapiens

<400> 230

ctcatcagtt	agaagaaaaa	gaaaatcaaa	ttaagagcat	gaaggctgat	attgaaagtc	60
ttgtaacaga	aaaagaagcc	ttacagaagg	aaggaggcaa	tcagcaacag	gctgcttctg	120
aaaaggagtc	ttgtataaca	cagttgaaga	aagagttatc	tgaaaacatc	aatgctgtca	180
cattgatgaa	agaagagctt	aaagaaaaaa	aagttgagat	tagcagtcct	agtaaacaac	240
taactgattt	gaatgttcag	cttcaaaaata	gcacacagct	atccgaaaaa	gaagcagcca	300
tttcatcact	aagaaagcag	tatgatgaag	aaaaatgtga	attgctggat	caggtgcaag	360
atattatctt	taaagttgac	actctgagta	aagagaaaaa	ttctgctctt	gagcaggtag	420
atgactggtc	caataaatct	tcagaatgga	agaagaaagc	acagtcaaga	tttacacagc	480
atcaaaacac	tgtaaagaa	ttgcagatcc	agcttgagtt	aaaatcaaa	gaagcttatg	540
aaaaggatga	gcagataaat	ttattgaagg	aagagcttga	tcagcaaaa	aaaagatttg	600
attgttttaa	gggtgaaatg	gaagacgaca	agagcaagat	gggagaaaaa	ggagtcctaat	660
ttagaaacag	agttaaagtc	tcaaacagca	agaattatgg	gattagagga	ccatattanc	720
caagaaaact	atattggaaat	tagagtcctt	aaatngaaa	ttccttaaaa	aattacaatc	780
aacaaaaagg	atattggacc	acaaagnaat	tgggtcaaaa	aaccttcaac	aantttcaag	840
ga						842

<210> 231

<211> 781

<212> DNA

<213> Homo Sapiens

<400> 231

atatagtaaa	taaactttat	ttatctgttt	ctcagagatg	acactgccaa	caatcacaga	60
tttgcataca	atacagttat	gtattggcta	ttcacaaatt	acagtatgtg	tttttccctc	120
gaaaaatata	agtacaaaag	ctaagtaaac	aatgaggtac	tgccatttgg	gattttttac	180
atgtcttagc	ttaaagaact	ggtcttttagc	aaatattcaa	cagatcaacc	tgaataaaat	240

agtcaattaa	atgctcta	ttatcagaaa	aatccacta	agtttcac	caaaatgtat	300
tgacaaagt	tttttaaaaa	atcacccata	aaataaatag	gaaaggtaag	ccgttcttta	360
aaaagaatgg	atgaaaggaa	tattatgtaa	gcccataaag	cagggttaagt	tatcaaaaata	420
tctttttaaac	aacataaaaac	tcttcccaag	agaaaactga	agaaaaaact	atcaccat	480
ctccactgat	aaaatctatt	ttaaaggcag	tctgcaactt	atctgtgggc	cagatttttc	540
ttgggtcttt	tggtacatg	aggggccctg	aatgacaact	tcattctcaa	agagtagcaa	600
agtgtggaca	agttttccaa	gcagcangtc	acccaatgtc	actcttcctc	aagatgaagg	660
atcggagcca	tgacacatgt	ttaactaagc	acagaccgga	tgggtttacc	cagaagatac	720
cactggcaan	ggtgaagtaa	acatcaggcc	gaggcaacct	tcccntttc	aaaaantttt	780
c						781

<210> 232

<211> 767

<212> DNA

<213> Homo Sapiens

<400> 232

gttatatagt	aaataaactt	tatttatctg	tttctcagag	atgacactgc	caacaatcac	60
agatttgc	acaatacagt	tatgtattgg	ctattcacaa	tttacagtag	tgttttttcc	120
tctgaaaaat	ataagtacaa	aagctaagta	aacaatgagg	tactgccatt	tgggattttt	180
tacatgtctt	agcttaaaga	actgggtctt	agcaaatatt	caacagatca	acctgaataa	240
aatagtcaat	taaatgctct	aatttatcag	aaaaaatcca	ctaagtttca	cctcaaaatg	300
tattgcacaa	gtctttttta	aaaatcaccc	taaaaataaa	taggaaagg	aagccgttct	360
ttaaaaagaa	tgatgaaaag	gaatattatg	taagcccata	aagcagggtta	agttatcaaa	420
atatctttta	aacaacataa	aactcttccc	aagagaaaac	tgaagaaaaa	actatcacca	480
tttctccact	gataaaatct	attttanagg	cagtctgcaa	cttatctgtg	ggccagattt	540
ttcttgggt	tttggctaca	tgaggggccc	tgaatgaaaa	cttcattctc	aaaggagtag	600
caagtgtggg	acagttttcc	aagcagcagt	cacccaatgt	cactcttctt	caagatgaaa	660
gatcggagnc	atgacacatg	ttaacctaa	nacangactg	gaggggtttac	ncangaagat	720
acactgcgaa	ggtgaaagtt	aaacatcaag	ccgaggaacc	tcccctt		767

<210> 233

<211> 879

<212> DNA

<213> Homo Sapiens

<400> 233

gggagtttaa	tacacagctg	gcacaaaagg	aacaagagct	ggaaatgacc	ataaaagaaa	60
ctatcaataa	ggcccaggag	gtggaggctg	aacttttaga	aagccatcaa	gaagagacaa	120
atcagttact	taaaaaaatt	gctgagaaa	atgatgatct	aaaacgaaca	gccaaaagat	180
atgaagaaat	ccttgatgct	cgtgaagaag	aatgactgc	aaaagtaagg	gacctgcaga	240
ctcaacttga	ggagctgcag	aagaaatacc	agcaaaagct	agagcaggag	gagaacctg	300
gcaatgataa	tgtaacaatt	atggagctac	agacacagct	agcacagaag	acgactttta	360
tcagtgattc	gaaattgaaa	gagcaagagt	tcagagaaca	gattcacaa	ttagaagacc	420
gtttgaagaa	atatgaaaag	aatgtatatg	caacaactgt	ggggacacct	tacaaagggtg	480
gcaatttgta	ccatacggat	gtctcactct	ttggagaacc	taccgaattt	gagtatttgc	540
gaaaagtgtc	ttttgagtat	atgatgggtc	gtgagactaa	gaccatggca	aaagttataa	600
ccaccgtact	gaagttccct	gatgatcaga	ctcagaaaat	tttgggaaaa	gagaagatct	660
cggctgatgt	ttacttcacc	tcgcagtgg	atcctcngag	taaacctatca	gtcgtgccta	720
agtttacatg	tgtcatgggt	ccgattcttc	atcctttgaa	gaaagagtgg	acattgggggt	780
naccggctgc	cttgggaaaa	ctgtccanac	nttgcnacn	ccttgggggaa	atggaagntt	840
ttccanttca	agggccccct	caangnttgc	ccaaacagg			879

<210> 234

<211> 780

<212> DNA

<213> Homo Sapiens

<400> 234

aaacttttatt	tatctgtttc	tcagagatga	cactgccaac	aatcacagat	ttgcatacaa	60
tacagttatg	tattggnnng	gcacaattta	cagtagtggt	ttttcctctg	aaaaatataa	120
gtacaaaagc	taagtaaaca	atgaggtact	gccatttggg	attttttaca	tgtcttagct	180
taaagaactg	gtcttttagca	aatattcaac	agatcaacct	gaataaaaata	gtcaattaaa	240
tgctctaatt	tatcagaaaa	aatccactaa	gtttcacctc	aaaatgtatt	gcacaagtct	300
ttttaaaaaa	tcaccctaaa	aataaatagg	aaaggtaagc	cgttctttta	aaagaatgga	360
tgaaaggaat	attatgtaag	cccataaagc	aggtaagtt	atcaaaaatat	cttttaaaaca	420
acataaaact	cttcccaaga	gaaaactgaa	gaaaaaacta	tcaccatttc	tccactgata	480
aaatctattt	taaaggcagt	ctgcaactta	tctgtgggcc	agatttttct	tggtcttttg	540
gctacatgag	gggcccgtga	tgaaaacttc	attctcaaag	agtagcaagt	gtggacaagt	600
tttccaagca	gcagtcanc	aatgtcactc	ttcttcaaga	tgaaagatcg	gagccatgac	660
acatgttaac	taagcacaga	cntgatgggt	tactncagaa	gattaccact	gcnaagggtga	720
aagttaaaca	tcaagncgag	catnctctc	tttccaaaaa	ttttccgng	tccggattca	780

<210> 235

<211> 780

<212> DNA

<213> Homo Sapiens

<400> 235

attctgaggg	tatattaagt	cagagtcagg	ataaatcact	tcggagaata	gcagaattaa	60
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cttttagagga	gaaagatcag	tatatcagtg	ttctccaaac	tcaggtttct	ctactgaaac	180
aacgattacg	aaatggcccg	atgaatgttg	atgtactgaa	accacttcct	cagctggaac	240
cacaggctga	agtcttcact	aaagaagaga	atccagaaag	tgatggagag	ccagtagtg	300
aagatggaac	ttctgtaaaa	acactggaaa	cactccagca	aagagtgaag	cgtaagaga	360
acctacttaa	gcgttgtaag	gaaacaattc	agtcacataa	ggaacaatgt	acactattaa	420
ctagtgaaaa	agaagctctg	caagaacaac	tggatgaaag	acttcaagaa	ctagaaaaga	480
taaaggacct	tcatatggcc	gagaagacta	aacttatcac	tcagttgcgt	gatgcaaaga	540
acttaattga	acagcttgaa	caaggataag	ggaatggtaa	tcgcagagac	aaaacgtcag	600
atgcatgaaa	ccctggaaat	gaaagaagaa	gaaattgctc	aactccgtag	tcgcatcaaa	660
cagatgacta	cccaagggag	aggaattacg	ggaacaagan	agaaaagtcc	gaaagaactg	720
cntttgaggg	aacttgaaaa	agccttgagt	acagnccaaa	aanacagngg	aagccaccgg	780

<210> 236

<211> 711

<212> DNA

<213> Homo Sapiens

<400> 236

cttgggtttt	aaatttggtt	tcatattcct	cattcaaaaat	atgaatactg	tcctccttgg	60
ctgacaattt	ctgtgtgagt	atctcaattt	ctttcttctg	tccttctctc	atgtgtaaaa	120
tcatattttc	cttttccacc	aagatttgct	ttgtctgttc	ctgttctttg	ttaccatctt	180
caagtttgga	ctcatagact	tgggttaaag	attttacttt	ttgtctcatt	tactattttt	240
gtttttcaag	ttgtctgcat	aagtcttgca	cctggatttt	gtgagcatct	aactcagtac	300
aaacatcttt	cttttgtgct	tcaacttcag	caacctgttt	ggtaagaaga	attctttctg	360
tttccaaatc	caacaacttc	tgctgcaatt	gggccaaactg	ttctcatat	gcttttgtct	420
gctcatgtgt	ggcactctgg	taagactgaa	aaacgtccag	cttagcagat	gcctgctgga	480
gttccccctc	agacctttta	atatctgcct	ccaaattttc	tacatgagcc	tgatgctctt	540
tcaaagtctt	gtccctttcc	ttcaagagaa	gctcaagtgt	nttaanttga	tcttttaaa	600
ccttctcaan	tcctccggga	tanaaaacnt	cgtgttcttt	naatgagaac	ggccaacntg	660

ccggctgggt gataantttt ccgttcance anccttgggg ctccaaattc c

711

<210> 237

<211> 658

<212> DNA

<213> Homo Sapiens

<400> 237

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tgcatacaat acagttatgt	attggctatt	cacaatttac	agtagtggtt	tttcctctga	120
aaaatataag tacaaaagct	aagtaaaca	tgaggtagct	ccatttgga	ttttttacat	180
gtcttagctt aaagaactgg	tcttttagca	atattcaaca	gatcaacctg	aataaaatag	240
tcaattaaat gctctaattt	atcagaaaaa	atccactaag	tttcacctca	aaatgtattg	300
cacaagtctt tttaaaaaat	caccctaaan	ataaatagga	aaggtaagcc	gttcttttaa	360
aagaatggat gaaaggaata	ttatgtaagc	ccataagagc	aggtaagtt	atcaaaatat	420
cttttaaaaca ncataaaact	cttcccanga	gaaaactgaa	gaaaaaacta	tcaccatttc	480
tccactgata aaatctat	ttaaaggcag	ctgcanccta	tctgtgggcc	aagatttttc	540
ttggncctttt ggctacatga	gggggccctg	gaatgaaaaa	cttcattccc	aanggagttt	600
gcnaggtgtg ggacaggtt	tccaaggcaa	gcaagtnagc	caaatngtca	gctcttcc	658

<210> 238

<211> 678

<212> DNA

<213> Homo Sapiens

<400> 238

gttatatagt aaataaactt	tatttatctg	tttctcagag	atgacactgc	caacaatcac	60
agatttgcac acaatacagt	tatgtattgg	ctattcacaa	tttacagtag	tgttttttcc	120
tctgaaaaat ataagtacaa	aagctaagta	aacaatgagg	tactgccatt	tgggattttt	180
tacatgtctt agcttaaaga	actggctctt	agcaaata	caacagatca	acctgaataa	240
aatagtcaat taaatgctct	aatttatcag	aaaaaatcca	ctaagtttca	cctcaaaatg	300
tattgcacaa gtctttttta	aaaatcaccc	taaaaataaa	taggaaaggt	aanccgttct	360
ttaaaaagaa tggatgaaag	gaatattatg	taagcccata	aagcagggtta	agttatcaaa	420
atatctttta aacaacataa	gaactcttcc	caaggagaaa	actgaannaa	aaaactatca	480
ncatttcnnc actgataaaa	tctantttta	aggnagtcn	gcaacttanc	tgtgggccag	540
atctttccgt ggggcttttg	ggctacantn	agggggccct	gaatgaaaaa	nttcaattcc	600
ncaaatgnng tagcaaatg	tgggncangt	ttttccaaag	cagncaantt	cancecnana	660
tgctactcct tccttcaa					678

<210> 239

<211> 1402

<212> DNA

<213> Homo Sapiens

<400> 239

gggagtttaa tacacagctg	gcacaaaagg	aacaagagct	ggaaatgacc	ataaaagaaa	60
ctatcaataa ggcccaggag	gtggaggctg	aacttttaga	aagccatcaa	gaagagacaa	120
atcagttact taaaaaaatt	gctgagaaag	atgatgatct	aaaacgaaca	gccaaaagat	180
atgaagaaat ccttgatgct	cgtgaagaag	aaatgactgc	aaaagtaagg	gacctgcaga	240
ctcaacttga ggagctgcag	aagaaatacc	agcaaaagct	agagcaggag	gagaaccctg	300
gcaatgataa tgtaacaatt	atggagctac	agacacagct	agcacagaag	acgactttta	360
tcagtgatcc gaaattgaaa	gagcaagagt	tcagagaaca	gattcacaa	ttagaagacc	420
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gcaatttgta ccatacggat	gtctcactct	ttggagaacc	taccgaattt	gagtatttgc	540
gaaaagtgtc ttttgagtat	atgatgggtc	gtgagactaa	gaccatggca	aaagttataa	600

ccaccgtact	gaagttccct	gatgatcaga	ctcagaaaat	tttggaaaga	gaagatgctc	660
ggctgatgtt	tacttcacct	cgcagtggtg	tcttctgagt	aaaccatcag	tctgtgctta	720
gttaacatgt	gtcatggctc	cgatcttcat	cttgaagaag	agtgcattg	gggtgactgct	780
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catgtagcca	aaagaccaag	aaaaatctgg	cccacagata	agttgcagac	tgcttttaaa	900
atagatttta	tcagtggaga	aatgggtgata	gttttttctt	cagttttctc	ttgggaagag	960
ttttatgttg	tttaaaagat	attttgataa	cttaacctgc	tttatgggct	tacataatat	1020
tcctttcatc	cattcttttt	aaagaacggc	ttacctttcc	tatttatattt	taggggtgatt	1080
ttttaaaaaag	acttgtgcaa	tacatttttg	ggtgaaactt	agtggattttt	ttctgataaa	1140
ttagagcatt	taattgacta	ttttattcag	gttgatctgt	tgaatatattg	ctaaagacca	1200
gttctttaag	ctaagacatg	taaaaaatcc	caaatggcag	tacctcattg	tttacttagc	1260
ttttgtactt	atattttttca	gaggaaaaaa	cactactgta	aattgtgaat	agccaataca	1320
taactgtatt	gtatgcaa	ctgtgattgt	tggcagtgct	atctctgaga	aacagataaa	1380
taaagtttat	ttactatata	ac				1402

<210> 240
 <211> 760
 <212> DNA
 <213> Homo Sapiens

<400> 240						
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aaaataatgg	ctttttggct	tttggctttt	ttattatctt	aatatgtgta	tccacaatta	120
tggtatcaac	tcaatatgaa	aaactcaact	taattttgtg	catgattttc	ataccttctt	180
tcactttgct	gggggtatgtc	atgttattga	tccagctcga	ctttatgaga	aacttgagaa	240
gtctggacaa	tagaataaat	gaagtcaata	aaaccattct	tttaacaacc	ttaataccat	300
accttcagag	tgttattttt	ctttttgtca	taagggtgtc	ggaaatgaag	tatggaaatg	360
aaataatgaa	taaagaccca	gttttcagaa	tctctccacg	gagtagagaa	actcatccca	420
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aggaatatta	tgagacaaaag	aaaagtgtgt	tttcaacaag	aaagaagaaa	atagccatca	600
gaaatgtttc	cntttgtgtt	aaaaaagggtg	aaagttttgg	ggattaccta	ggacacaatg	660
ggagctggta	aaagtacttc	cattaaaatg	ataacntggg	tgcacaaagc	caaactgcan	720
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<210> 241
 <211> 745
 <212> DNA
 <213> Homo Sapiens

<400> 241						
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cncnggtatt	acatcaatac	agctataaca	ttaatgcagc	aattatataa	cacaaaagtg	120
ctataatgac	atgggaaatg	ttcatgaact	gtgaggtgaa	aagatacaga	aaatgactat	180
gcctacngat	actacctttg	aaaaaggatc	cataaaaaat	acattgaata	taagttggct	240
aaagaaaata	ttaactgcgg	tactttctta	cagattangg	ctancttctt	ccatataact	300
tcaatatgta	ctaaaattca	catgcattta	ttttataatc	agaatgtcat	tataattaaa	360
tgttangctg	tgccatttca	tcagttttatc	anaccttctt	atagtcaatg	tcacattaaa	420
ttagaatccg	agtaaataa	gtttaaaaat	anctgatata	tttgaagttc	aggctaaaaa	480
cctcatattt	ttattttgta	aatgtttctca	ntgttagctt	tattgataat	aaccgataac	540
caacctaata	ttgtangatt	tttaaatatt	ttttaagcac	aaantagacc	catgttgggg	600
atgaataaca	tgctngattt	tgtnaatttt	ggtcnacnac	ttttcccaaa	aatttccttg	660
tttccttcan	ccnaaatttt	taaaantgaa	aactgtatca	attatggaan	ggtttattaa	720
aangtttncc	tttggttaacc	ngaag				745

<210> 242
 <211> 818
 <212> DNA
 <213> Homo Sapiens

<400> 242
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 caaaggctctg aatacagatg aattaggtca gaaggaagaa gcaaagaact actataagca 180
 aggaatagga cacctgctca gagggatcag catttcatca aaagagtctg aacacacagg 240
 tcttgggtgg gaatctgcta gacagatgca acagaaaatg aaagaaactc tacagaatgt 300
 acgcaccagg ctggaaattc tagagaaggg tcttgccact tctctgcaga atgatcttca 360
 ggaggtgccc aagttatatc cagaatttcc acctaaagac atgtgtgaaa aattaccaga 420
 gcctcagtct tttagttcag ctctcagca tgctgaagta aatggaaaca cctcaactcc 480
 aagtgcaggg gcagttgctg cacctgcttc tctgtcttta ccatcacaaa gttgtccagc 540
 agaagctcct cctgcttata ctctcaagc tgctgaaggt cactacactg tatectatgg 600
 aacagattct ggggagtttt catcagttgg agaggagttt tatagggaat cattctcagc 660
 caacggcctc ttnagaacct taagggtctg gattcangat gaaattgatt ttgataccaa 720
 atgggagtac annttttttt tgtaaatcct gcaangggga ngttatgcan cttcgtance 780
 ccggggtacc tttnaattgt gaagggtttt gggntaaa 818

<210> 243
 <211> 799
 <212> DNA
 <213> Homo Sapiens

<400> 243
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 acgtaataat ctatttttat tcatttttaa tcaaagaaac cattccattt cctaacaaac 180
 aggtaagtta caaaagtagt ccattttact tttcatcagt ctttccctgt tttgaacaag 240
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 gcatctaaaa aaatccacaa ttagtgcaaa aagaggggac aatactttta gtcattcctt 360
 ctataaaaaag aattaaggtt actaaatgcc aatttttaag caaatatata gtttccattt 420
 tgcttctga aagacagcag atataaaaaat agttcaatat taggtttaac aagggttgaa 480
 caacacatgt actatcagct ttattttacc tgcaaaaaata ttttagctac acttggaana 540
 aaaataaact tgagaatata acttcacatt tctaaggcca gatgcaagaa tacttaatct 600
 tttcctttta aatagaagac atgccataaa atttatgaaa agttaatttg taggaatggg 660
 atacatttaa aaaatacnng ttaaacnng tgagggaatt ccacatttg cctatttaac 720
 aaaaatttta aaccaatttt caaaaggggc tttggggtaa aaagtngatt cccaagcaac 780
 ntcaancant ttaaccttc 799

<210> 244
 <211> 726
 <212> DNA
 <213> Homo Sapiens

<400> 244
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 tctacttcac cagcagcagc gttaattcat ctgcctacac tatttacatg ggaaaagata 120
 aatatgaaaa tgaagatctg atcaagcatg gctggcctga agatatctgg tttcatgtgg 180
 acaaaactctc ttcggtcat gtataccttc gattacataa gggagagaat atagaagaca 240
 tcccaaagga agtgctgat gactgtgccc acctgttgaa ggccaatagc attcaaggct 300
 gcaagatgaa caacgttaat gtggtatata cgccgtgggc taacctgaag aaaacagctg 360
 acatggatgt ggggcagata ggctttcaca ggcagaagga tgtaaaaaatt gtgacagtgg 420

agaagaaagt	aaatgagatc	ctgaaccgat	tagaaaagac	caaagtcgag	cggttcccag	480
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ttcaggaaat	gaaaaagaga	gaaanagaag	aaatgaagaa	gaanagggaa	atggatgaac	600
ttangagcta	ttcatcacta	atgaaagtgt	gaaaatatgt	cttcanatca	ggatggcaat	660
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<210> 245

<211> 592

<212> DNA

<213> Homo Sapiens

<400> 245

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atttggccag	tgagttttgc	ctcagggaa	tttccagttc	aacccccatac	accaacatgg	180
aataaatgga	aacactagcc	ttttggtttt	gcccanaagtt	ccaaagtgt	attacaggtg	240
gaatatctgc	tgcaggaagt	cattcttget	gctgtgggtg	tgagtaaaat	gcttagttcc	300
ttctaaaatc	ataattgcaa	tatggacttc	tgcttcacgc	tgcatacctaa	ggcacaaatc	360
aggtaacctta	catctcccaa	atgatcaaca	ggagcactcc	atcctatttt	accctcaatg	420
cnganaaatt	acnctggggc	ccanaagttg	tcacataggt	ggcttgggtt	acttggggct	480
caggcaacaa	ctgccacagg	ccccagcttg	atgaanacca	tcnatttctt	taaaatatgt	540
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<210> 246

<211> 821

<212> DNA

<213> Homo Sapiens

<400> 246

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tagaaatgaa	ggaacagatg	tatcaggaca	aactggcttc	tctcaagagg	cagttgcaac	180
aactgcaaga	aggtacatta	caggaatata	agaagagaat	gaaaaaacta	gatcagcagt	240
acaaagagag	gatacggaa	gcagaactct	tcctccagct	ggaaactgaa	caagtggaac	300
gaaattacat	taaagaaaag	aaggcagcag	tgaaagaatt	tgaagacaag	aagggtgagc	360
tgaaagagaa	cctgattgct	gagctagaag	aaaagaagaa	aatgattgaa	aatgaaaagc	420
tgacaatgga	actgactgga	gattctatgg	aggtgaaacc	tatcatgacc	agaaagttgc	480
ggaggcgacc	aaatgatccc	gtccccatcc	cagacaagag	gaggaaacct	gctccagccc	540
agctaaacta	tttgtttaaca	ggatgaacag	atcatggagg	atctgagaac	attaaataag	600
cttaagtca	ccaagagacc	agcatctcca	tcctctcctg	agcacttgcc	tgcaacaccc	660
gccggaatct	ccaagcccca	gaggttcnaa	agccccggat	anaagaatgg	caaacctgtt	720
actatgacaa	aaagatgggt	accacaagag	ccaaggccat	cctatcctgg	angtcaaagg	780
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<210> 247

<211> 639

<212> DNA

<213> Homo Sapiens

<400> 247

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gctacgtgat	ccactaatca	gattcaaaac	atgaaaatgc	actggagagt	gtatcccttc	180
ctgctcttct	ccatggtaga	gagacttaaa	gataatcaat	aaaaatagct	gtcccttcaa	240

actcagagga	ggtttttcaaa	aacaagtata	agcaaaaaat	aaagaaataa	aaggaaagta	300
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aagttgaggc	agaaaagact	gacaaaagttg	gaangcatcc	cggccacaaa	agtgcccnaa	420
aagaattcan	tgcagtgtc	tccattttcca	aggctgagta	actattccca	gntaagttaa	480
catttttcna	nttaaggana	nancgaanac	anntncatnt	ctanatccca	ctccagaaat	540
anggtcaatg	agaangangc	actgtannna	aagtcaagna	gctgganenc	ccggggcggnt	600
tnaccaaga	gcccggcgct	nnaagcctgg	gcccaagct			639

<210> 248

<211> 846

<212> DNA

<213> Homo Sapiens

<400> 248

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agtgaaggct	agccaacttt	cagttcagca	gaacaaattg	tctgtccagt	ccaatccttc	180
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acgagtgact	tctgtccgga	aacctgcagt	caatataaag	caaggtgaat	gtttgaattt	420
tggaataaaa	actcttgagg	aaattaagtc	aaagaaaatg	aaggaaaaat	ctaagaagca	480
agggtgagggt	tcttcaggag	tttccagttc	tttactccac	cctgagcccg	ttccagggtcc	540
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agaacccttg	gttagattga	gtcttactga	gagactgggg	aaacgaaaat	tttcagcagg	660
cggtgacagt	gacccctcat	ttaaagcgtag	cctggccacan	aggctaaggg	aagaaagttg	720
aagctccaga	aactaacant	gacaaaacac	caangaaagc	tcaagtttcc	aagtcacctt	780
aaagggcgga	attaggtcatg	tcagccngga	ttcaagataa	tnagggatgc	aacaagatta	840
aaggtt						846

<210> 249

<211> 763

<212> DNA

<213> Homo Sapiens

<400> 249

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aatgggttcaa	ataatgcgga	acacgaaaca	ttgactaata	caagtgtttt	aaatatgaaa	120
caaaaattatt	ttttaaaaaa	gcaaaaagaat	aaagaatata	tacaaaaggg	acctggaatc	180
tgtaagctga	ttccaaaaat	gaaataagta	gaaaatccat	ggtgaaacct	gaacattcta	240
cctctgtctt	ggagaagggc	tatcatacaa	cattcagtc	gctgaagatg	gattggtaga	300
ggtgtgtcta	tacataaaact	tcagtcattt	ttgcttgtgc	agaatcatcc	caatcttccc	360
aagactgaat	gggcagtcct	gtggctttct	tccttttcca	tattcccaac	aaggctacgt	420
gaagttcaac	tcttgatgag	ccgcttacaa	cagcagttcc	ttaggagcca	acatgacagg	480
tggttcagat	ttccctatga	gaaacaaaa	tgccaccta	cagcaaaaata	tcaaaatggg	540
taagtccttc	cttctcttc	ctcctgatta	tatacaacat	atctcctttc	aagactatta	600
tttccatcat	gccttatcc	ttcacaaatc	taaaccttga	ngtgatatga	angaaaccaa	660
catcaagaaa	agaaaactca	attcagaaat	gaanaaaacg	ggcaggtata	caatacaccc	720
cagagcatct	caatatcccc	tgggacagnt	acaattcagt	gtt		763

<210> 250

<211> 899

<212> DNA

<213> Homo Sapiens

<400> 250

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gaaaaatcag	tcttgacacc	tcttcgggga	gatgtagcct	cttgcaatac	ccaagtggca	120
gagaaaccag	tgctcactgc	tgtgccagga	atcacacggc	acctgaccaa	gcggcttccc	180
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gtgaaatgtg	cagcacagac	cttggaaaaa	aggggtaaaag	ctaaacccaa	agtgaacgtg	300
aagccatctg	tgggttaaagt	tgtgtcatcc	cccaaattgg	ccccaaaacg	taaggcagtg	360
gagatgcacg	ctgctgtcat	tgccgctgtg	aagccactca	gctccagcag	tgtcctacag	420
gaacccccag	ccaaaaaggc	agctgtggct	gttgtcccgc	ttgtctctga	ggacaaatca	480
gtcactgtgc	ctgaagcaga	aaatcctaga	gacagtcttg	tgtgcctcc	aaccagtc	540
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actcgcgcac	tcagctctgc	ctcaacaagg	aaagccccca	ctctctgtgg	aggatgattt	660
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cctgaaaggg	tggttaattga	nggacncctt	naaaaaaaaa	atccnccaaa	aaaactnggg	840
ccttaanttc	naccaaattg	taacaatttn	acctgagaat	gnttaatttc	ctttagggc	899

<210> 251

<211> 755

<212> DNA

<213> Homo Sapiens

<400> 251

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tcaaataatg	cggaacacga	aacattgana	nagacaagtg	ctttaaatat	gaaacaaaat	120
tatttttttaa	aaaagcaaaa	gaataaagaa	tatatataaaa	agggacctgg	aatctgtaag	180
gtgattccaa	aaacgaaata	agtagaaaat	ccatgggtgaa	acctgaacat	tctacctctg	240
ctttggagaa	gggctatcat	acaacattca	gtcagctgaa	gatggattgg	tagagggtgtg	300
tctatacata	aacttcagtc	atTTTTgctt	gtgcagaatc	atcccaatct	tcccaagact	360
gaatgggcag	tctgtgggt	ttcttctctt	tccatattcc	caacaaggct	acgtgaagtt	420
caactcttga	tgagccgctt	acaacagcag	ttccttagga	gccaacatga	cagggtgggtc	480
agatttccct	atgagaaaca	aaactggcca	cctacagcaa	aatatcaaaa	tggttaagtc	540
cttcttctct	cttctctctg	attatatata	acatatctcc	tttcaaagac	tattatttcc	600
atcatgctta	ntccttcaca	aatctaaacc	ttgagggtgat	atgaaggaaa	ccaacatcan	660
gaaaagaaaa	ctcaattcag	aatgaagaa	aacggggcang	tatacaattc	anccccagag	720
caacccaata	atccttgggc	aaaagttcaa	ttcaa			755

<210> 252

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 252

cctacatcag	ttttatttaa	aacactaaca	agtattttctc	tttctgtaag	ggcaaattggt	60
tcaaataatg	cggaacacga	aacattgact	aatacaagtg	ctttaaatat	gaaacaaaat	120
tatttttttaa	aaaagcaaaa	gaataaagaa	tatatataaaa	agggacctgg	aatctgtaag	180
gtgattccaa	aaacgaaata	agtagaaaat	ccatgggtgaa	acctgaacat	tctacctctg	240
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tctatacata	aacttcagtc	atTTTTgctt	gtgcagaatc	atcccaatct	tcccaagact	360
gaatgggcag	tctgtgggt	ttcttctctt	tccatattcc	caacaaggct	acgtgaagtt	420
caactcttga	tgagccgctt	acaacagcag	ttccttagga	gccaacatga	cagggtgggtc	480
agatttccct	atgagaaaca	aaactggcca	cctacagcaa	aatatcaaaa	tggttaagtc	540
cttcttctct	cttctctctg	gattatatata	aacatatctc	ctttcaagac	tattatttcc	600
atcatgcnta	atccttcaca	aatctaaaac	cttgagggtg	atatgaaagg	aaaccaacat	660
canagaaaag	aaaactcaat	tcaagaaaat	taagaaaacc	tggcaaggta	tacaaatata	720

ccccaggag catcccaa atccctggg aaa

753

<210> 253

<211> 793

<212> DNA

<213> Homo Sapiens

<400> 253

gactttctcta	catcagtttt	attttaaaca	ctaacaagta	tttctctttc	ngtaagggca	60
aatggttcaa	ataatgcgga	acacgaaaca	ttgactaata	caagtgcctt	aaatatgaaa	120
caaaattatt	ttttaaaaaa	gcaaaaagaat	aaagaatata	tacaaaaggg	acctggaatc	180
tgtaaggnga	ttccaaaaac	gaaataagta	gaaaatccat	ggtgaaacct	gaanattcta	240
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ggtgtgtcta	tacataaaact	tcagtcattt	ttgcttgtgc	anaatcatcc	caatcttccc	360
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gaagtccaac	tcttgatgag	ccgcttacaa	cagcagttcc	ttaggagcca	acatgacagg	480
tgggtcagat	ttccctatga	gaaacaaaac	tggccaccta	cagcaaaata	tcaaatggg	540
taagtccttc	cttctcttcc	cncctgatta	tatacaanat	atctcctttc	aagactatta	600
tttccatcat	gcttattcct	tcacanatct	aaaccttgan	gtgatatgaa	nggnaaccaa	660
catcangaaa	agaaaactca	attcagnaat	gaangaaaac	tgggaggtat	ttaatanacc	720
cccangnnga	atccaaatac	cctggnaana	gttcaattca	antgtacngc	naaagnccat	780
aantaantat	tgg					793

<210> 254

<211> 625

<212> DNA

<213> Homo Sapiens

<400> 254

cctacatcag	ttttatttaa	aacactaaca	agtattttct	tttctgtaag	ggcaaatggt	60
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tattttttta	aaaagcaaaa	gaataaagaa	tatatacaaa	agggacctgg	aatctgtaag	180
gtgattccaa	aaacgaaata	agtagaaaat	ccatggtgaa	acctgaacat	tctacctctg	240
ctttggagaa	gggctatcat	acaacattca	gtcagctgaa	gatggattgg	tanaggtgtg	300
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gaatgggcag	tctgtggct	ttcttctttt	tccatattcc	caacaaggct	acgtgaagtt	420
caactcttga	tgagccgctt	acaacancaa	gttctcttang	agccaacatg	acaggtgggg	480
tcangatttc	cctatgagaa	acaanactgg	ccacctacag	caaaaatatn	aaaatggggt	540
aagtccttcc	ttctcttctc	tcctgaatta	tatncaacat	ntctcctttt	caagacnatt	600
anttccatca	gggcttaatc	cttca				625

<210> 255

<211> 907

<212> DNA

<213> Homo Sapiens

<400> 255

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tggccaagcg	cgctcggcgc	tgcgacgctg	gcgggccccg	tcagctagag	ccggggctac	180
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gtgacattaa	ggcatctaca	gagatgaggt	taagaagatt	ccagtcagtg	gaaagtggag	420
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ttctccagga	tatgtacaaa	accaagaaaa	agaagactcg	agttatTTTTg	cgaatgtttac	540
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tggaaccctg	gtttaaagct	ccaaacaaag	ggacatttca	gattgtgtac	aaaatctcga	660
nataacagtc	atgtnaatag	agaagaagtt	atcaagagaa	tttgcannga	atagtgtgca	720
acctcaattc	agnaaataaa	gtgggtntca	acaatccaca	agtacacaat	ngtaatanaa	780
atcatcaaan	ctgtcngttc	cctganngtt	tgttaaagga	ttacaagggt	ggtttannaa	840
aattcaatcn	ccaagaaggt	tggtnaanaa	nccccctang	ggntccttca	naggcnttaa	900
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<210> 256

<211> 794

<212> DNA

<213> Homo Sapiens

<400> 256

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gacctctgg	tatcagatat	gatgtcacaa	aanagagata	ttggcctttg	ttctggcagg	120
ctcctagcaa	tagaaaaagt	tttctttgaa	tttcatcatt	tacaaatctt	acaaatgcta	180
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caagaatttc	ctttgggtgc	cccttgggtg	cactaagtat	acttgaaagt	ntnctccagn	720
angactggaa	gttcttcaat	caaccaanct	ttttcaagaa	aatgtccngt	agtttcaang	780
gcctaaaaat	gggt					794

<210> 257

<211> 885

<212> DNA

<213> Homo Sapiens

<400> 257

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gagcaaataa	cgttgtcttc	atcaggacac	ttgggataga	gcctgagaaa	ttggtgcac	480
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tacctatctc	aggcacatgc	aaggcttttt	tagaagatat	gaaaaaatat	gcagaaacat	600
ttttggaacc	ctgggtttta	agctccaaac	aaagggacat	ttcagattgt	gtacaaatct	660
cgaaataaca	gtcatgtgaa	tngagaaaga	agttatcaga	gaaattggca	aggaatagtt	720
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<210> 258

<211> 798

<212> DNA

<213> Homo Sapiens

<400> 258

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gactcatcat	cctggataga	gaagctgcta	cttttcagtt	aatgacacaa	aacctttttt	420
gcatcatatg	acatatcatc	aagtaaatac	acttattgag	aataaagtct	cttcaacttt	480
gtactgcata	ttgccccagc	attttaatgt	tattaagatt	ctcaccaacc	atgcataatt	540
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<210> 259

<211> 831

<212> DNA

<213> Homo Sapiens

<400> 259

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cagtcagtgg	aaagtggagc	aaataacggt	gtcttcatca	ggacacttgg	gatanagcct	480
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nttggaagg	aataatgntg	caacctcaat	tcagaaaata	aaagtggatt	tcaccaattc	780
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<210> 260

<211> 772

<212> DNA

<213> Homo Sapiens

<400> 260

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tcctagcaat	agaaaaagtt	ttctttgaat	ttcatcattt	acaaatctta	caaagtctac	180
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tattgagaat	aaagtctctt	caacttttga	ctgcatcttg	ccccagcatt	ttaatgttat	360
tagatttctca	ccaaccatgc	atattttcct	ttcctgagat	aagtctctgt	actaaataat	420
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gttacaattg	ctagttttgt	nagttgcatg	tcacagacaa	tgcacaatgg	gacangagag	600

cctgggactg	agtccacata	atacccntga	gaagtannct	ttctttatta	agacagaant	660
tctttgtgtc	ccttggtgca	caagtntact	gaagtntcnc	aagaaggact	ggangtcntc	720
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<210> 261

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 261

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cagtatgtgc	tggccaagcg	cgctcggcgc	tgcgacgctg	gcgggccccg	tcagctagag	180
cccgggctac	agggcatcct	catcacctgc	aatatgaacg	agcgcaagtg	cgtggaggag	240
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aaagaagttg	gtgacattaa	ggcatctaca	gagatgaggt	taagaagatt	ccagtcagtg	420
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cgaatgttac	ccatctcagg	cacatgcaag	gcttttttag	aaagatatga	anaaatatgc	600
anaaaacatt	tttggaaccc	tgggtttaaa	gctccaaaca	aagggaacatt	tcagaattgt	660
ggtacaaatc	tcgaaatanc	agtcatgtta	antagagaaan	naagtttttc	agaagaattt	720
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<210> 262

<211> 659

<212> DNA

<213> Homo Sapiens

<400> 262

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tcctagcaat	agaaaaagtt	ttctttgaat	ttcatcattt	acaaatctta	caaagtctac	180
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tttcagttaa	tgacacaaaa	ccttttttgc	atcatatgac	atatcatcag	taaatcaact	300
tattgagaat	aaagtctctt	caacttttga	ctgcatcttg	ccccagcatt	ttaatgttat	360
tagattctca	ccangccatg	catattttcc	tttcctgaga	taagttctgc	tactaaagaa	420
tttgcttctt	aaaccttttg	actaaagggt	atctctgaac	aaaagcctta	ctgtttttga	480
nnagtccana	agccatttga	aaaataatga	atatcctttc	cttgtcaagt	ggcngtgatt	540
tantgttaca	atcttgnagg	ttttgttaagt	tgcattggta	cagnanaatg	cacantnggg	600
acanngagan	cntgggncng	aagtccacat	tatanccctt	tgagnaangt	agctttccc	659

<210> 263

<211> 673

<212> DNA

<213> Homo Sapiens

<400> 263

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gctgctgacc	ttcaaggtga	gggggttaagc	acaacagcaa	cagctgtgat	cacagtcact	360
gacaccaacg	ataatcctcc	gatcttcaat	cccaccacgt	acaagggtca	ggtgcctgaa	420

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aacgaggcta acgtcgtaat caccacactg aaagtgactg atgctgatgc ccccaatacc 480
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ccacaaatcc agtgaacaac gatggcattt tgaaaaacag caaagttgaa gtcaagtgat 600
tttgtcgtgt cngaataat tgttgccctn gttgggagaa aggtntccaa cacatacccc 660
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<210> 264

<211> 661

<212> DNA

<213> Homo Sapiens

<400> 264

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gggtggccaa ccgcttctcc tcaagttcca anagagtggg caattagtga aattccatca 240
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gagccaggtc tacggcaggg aacatgatct tcttctccag cttctgtgga aggaacanga 600
aatttttcat gatgtcntcc agctcttcta nggccaactg ggcattgganc ttggccacgt 660
c 673

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<210> 265

<211> 659

<212> DNA

<213> Homo Sapiens

<400> 265

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gtccttcatt ttcttgaana anaatctcag cctgaaagaa tatanagcta ggtgacatat 180
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gganccaggt ctacggnagg accatgatct tcttctccan cttctgtgga aggaacanga 600
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<210> 266

<211> 620

<212> DNA

<213> Homo Sapiens

<400> 266

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gtccttcatt ttcttgaana anaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca ananagtggg caattagtga aattccatca 240
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aaaaatgtag attaatagaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360

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aacgcgggag	tgctgaacac	atgccctcgg	aagggaccct	gaagacccaa	gtgacctgca	420
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tgctggaaga	cctgggcacg	gctctgggtg	cctggccctg	cctgcctcct	ccacgtcctt	540
ggagccaggt	ctacngcang	aacatgatct	tcttctccac	ttctgtggaa	ggaacaggaa	600
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<210> 267

<211> 745

<212> DNA

<213> Homo Sapiens

<400> 267

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tgctcagctta	tgaccctcaa	attccaacac	gggctgctgc	cctgcgtact	ctttcccact	180
ggatagagca	gagagaagca	aaagcccttg	agatgcaaga	gaagcttctc	aagatattct	240
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gtggggttgt	gcctgcnnng	tttcggggga	actcaaccca	agaaaaagct	tantgtaagg	720
gtggnttaan	ccnccggtcc	ttcaa				745

<210> 268

<211> 676

<212> DNA

<213> Homo Sapiens

<400> 268

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gctcctcatt	ttcctgaana	anaatctcag	cctgaaagaa	tatagagcta	ggtagacatat	180
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gtcatgttaa	aatatacttt	caccaggtag	acatccttct	ttcaatgcta	gaggacagtg	300
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ccataaaacc	accccagagg	tcagccatgc	tgccagcact	caagaagcag	cagggccacc	480
tgctggaana	cctgggcacg	gctctgggtg	cctggccctg	cctgcctcct	ccacgtcctt	540
gggagccagg	tctacggcag	ggaacatgat	cttcttctcc	agcttctgtg	gaaggaacag	600
gaagtthttc	atgatgtcat	ccanctcttc	taaggccaac	tgggcatgga	acttggccac	660
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<210> 269

<211> 737

<212> DNA

<213> Homo Sapiens

<400> 269

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gtgtcatcca	acgggaatgc	agttgaggat	ccaatggaga	ttctgatcac	ggtaaccgat	180
cagaatgaca	acaagcccga	attcaccag	gaggtctctt	aggggtctgt	catggaagg	240

gctcttccag	gaacctctgt	gatggaggtc	acagccacag	acgcggacga	tgatgtgaac	300
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aatatgttca	ccattaacag	gaacacagga	gtcatcagtg	tggtcaccac	tggtgctggac	420
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ttaagcacia	cagcaacagc	tgtgatcaca	gtcactgaca	ccaacgataa	tcctccgata	540
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caacactgaa	aagtgaactga	tgctgatgc	cccccaatta	noccanccgt	gggaagctgt	660
ntacaccata	tngaaatgat	gatgggtggg	cnaatttgn	cgttcaccaa	caaatnccan	720
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<210> 270

<211> 726

<212> DNA

<213> Homo Sapiens

<400> 270

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atctttcatg	atgtctccan	ctcttctagg	gccactgggc	atggancttg	ggcnctcat	660
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<210> 271

<211> 814

<212> DNA

<213> Homo Sapiens

<400> 271

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<210> 272

<211> 862

<212> DNA

<213> Homo Sapiens

<400> 272

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cccagacagg	cctgcagtca	aatgctccaa	tcattcctca	aggagtcaat	gagcccagca	180
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<210> 273

<211> 677

<212> DNA

<213> Homo Sapiens

<400> 273

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<210> 274

<211> 863

<212> DNA

<213> Homo Sapiens

<400> 274

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<210> 275

<211> 821

<212> DNA

<213> Homo Sapiens

<400> 275

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gctcctcatt	ttcctgaaga	agaatctcag	cctgaaagaa	tatagagcta	ggtgacatat	180
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gtcatgttaa	aatatacttt	caccaggtag	acatccttct	ttcaatgcta	gaggacagtg	300
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aacgcgggag	tgctgaacac	atgccctcgg	aagggaccct	gaagacccaa	gtgacctgca	420
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ggngetcanc	acctcagtaa	nctttctggc	tgagtcccc	gaaagcaaca	gcacaancca	780
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<210> 276

<211> 722

<212> DNA

<213> Homo Sapiens

<400> 276

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gtacaagggt	caggtgcctg	agaacgaggc	taacgtcgta	atcaccacac	tgaaagtgc	120
tgatgctgat	gcccccaata	ccccagcgtg	ggaggctgta	tacaccatat	tgatgatga	180
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aaagttagaag	tcaagtgatt	ttgctgttct	gaagcagttg	ttgcctctgt	tggagaagggt	300
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cagaaaagat	ctggaaggga	aaatagaaga	gcagcaacaa	accagtcag	aaagacccac	480
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gcctgcagtc	aaatgctcca	atcattcctc	aaggagtcaa	tgagcccagc	actactacaa	600
gtcagaaatc	tggaagcgtt	accacagaac	agctccaaga	ggttcntttg	tcagctttat	660
gaacctcaaa	ttccaacacg	gggctggtgc	ctgcgttact	cnttcccact	gggntagaag	720
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<210> 277

<211> 805

<212> DNA

<213> Homo Sapiens

<400> 277

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gctcctcatt	ttcctgaaga	agaatctcag	cctgaaagaa	tatagagcta	ggtgacatat	180
gggtggccaa	ccgcttctcc	tcaagttcca	agagagtggg	caattagtga	aattccatca	240
gtcatgttaa	aatatacttt	caccaggtag	acatccttct	ttcaatgcta	gaggacagtg	300

aaaaatgtag	attaatgaga	tctgtaactg	tcttctctta	actgtacacc	cctcaggctg	360
aacgcgggag	tgctgaacac	atgccctcgg	aagggaccct	gaagacccaa	gtgacctgca	420
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ngaagttttt	caagatgtca	tccaactcct	ccaagggcca	actggggcat	gggagccttg	660
gcacgtcatn	cgggctccag	acacactacg	gtgcttcaac	aagggnggta	nagattcttg	720
anggacgggg	ctcaaacaat	gaacctcant	tacctttcng	gctgagtcce	cnaaagcaac	780
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<210> 278

<211> 1358

<212> DNA

<213> Homo Sapiens

<400> 278

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tggtgggtctt	ggtctgcctc	cagctcttgg	aggcagcagt	ggtcaaagtg	cccctgaaga	120
aattttaagtc	tatccgtgag	accatgaagg	agaagggtct	gctgggggag	ttcctgagga	180
cccacaagta	tgatcctgct	tggaagtacc	gctttgggtga	cctcagcgtg	acctacgagc	240
ccatggccta	catggatgct	gcctactttg	gtgagatcag	catcgggact	ccaccccaga	300
acttctctgg	ccttttttgac	accggctcct	ccaacttgtg	ggtgccctct	gtctactgcc	360
agagccaggc	ctgcaccagt	cactcccgct	tcaaccccag	cgagtcgtcc	acctactcca	420
ccaatgggga	aaccttctcc	ctgcagtatg	gcagtggcag	cctcaccggc	ttcttttggt	480
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aatnagcctg	ggtaccaact	tcgtctaagc	gcagtttgat	ggcatcatgg	gcctggcctt	600
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<210> 279

<211> 702

<212> DNA

<213> Homo Sapiens

<400> 279

gaagcaatga	atacgcaatt	agaactttca	gaacaactta	aatttcagaa	caactctgaa	60
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attttatatc	tgcaaaagca	attagacgct	accactgatg	aaaagaagga	aacagttact	180
caactccaaa	atatcattga	ggctaattct	cagcattacc	aaaaaaatat	taatagtttg	240
caggaagagc	ttttacagtt	gaaagctata	caccaagaag	aggtgaaaga	gttgatgtgc	300
cagattgaag	catcagctaa	ggaacatgaa	gcagagataa	ataagttgaa	cgagctaaaa	360
gagaacttag	taaaacaatg	tgaggcaagt	gaaaagaaca	tccagaagaa	atatgaatgt	420
gagttagaaa	atttaaggaa	agccacctca	aatgcaaacc	aagacaatca	gatatgttct	480
attctcttgc	aagaaaatac	atttgtagaa	caaagtagta	aatgaaaaag	tcaaacactt	540

agaagataacc	ttaaaaagaa	cttgaatctc	aacacagtat	cttaaaaaga	tgagggtaac	600
ttatatgaat	aatccttaag	tttaaaactt	gaaaatggga	tgcttcaacc	attttaaagg	660
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<210> 280

<211> 874

<212> DNA

<213> Homo Sapiens

<400> 280

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aacagtgaga	tctctgagca	catgggtctgt	acctcaacca	cttttctatc	accaggggtct	120
agaatagttg	ggcattttaa	taaaatttgc	taaatgaatg	aaaaatccaa	aataaatcat	180
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gaaagagaag	gcaaacaggt	gttagagggg	caagaatgtg	agctcgagga	aaagacagct	300
acgaactgtg	tttttaacaa	ctcattatct	ggctactata	tttcccaatc	tattctaaca	360
ctaagaagaa	tctgtcta	taattgtgac	aacatctgca	aaaccatagt	tacctatctt	420
ttcttccaac	tcttttactg	aagacagagg	atcatttttt	acagaagggtg	attttgctaa	480
ggaatcctan	attttacagg	ggggaaaaaa	aaacacnaaa	caaaacaaaa	accagaatca	540
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actgaactta	ctatgcatat	ggcattttact	attaaaaaaa	aaaaagtant	aaccaaggcc	720
aaganaaaca	acctgaaaca	ttaaatacat	ntttataagg	aaaaantaaa	tgaattttta	780
tcttaatttt	aaanaaaaac	cnaaaatttt	nncatacccc	cccgtcttta	cttaaaaant	840
gncttaccac	aataactaanc	ctttcccccac	aacc			874

<210> 281

<211> 730

<212> DNA

<213> Homo Sapiens

<400> 281

acaaaacagc	agctggaaaag	agaaatgtag	gtggcagacg	agccaggcac	gaggtttcag	60
attggaaggg	accaagatga	ggaccaaggt	gtggctgcct	gactaggaac	gctgtgggct	120
ggcccagggt	ctcgccacac	atcctgggan	aactgccata	ggccctagaa	ggagggatga	180
aaggcgtagt	ggaggggaana	cagcggtccc	cggatcagca	gcagcaccac	catcctctga	240
tggcccttgg	gcagtcgcgc	agctcggaag	cactcagggc	tggagccttg	gctctaagca	300
tgggccccag	gagccanaca	ggagggaggc	agcaggaang	gctggcatgg	aagggctgag	360
ttctattggg	gtcccacgcg	ggcaaggga	ccaggactca	tccctgcttg	tcagccaatc	420
agcttcttca	ggaagcctcc	aactgatcct	catccttgat	gcccacaaac	ttgtccacca	480
cgtccccatt	cttcatggcc	agcacagtgg	gcaccgctga	cacctcatac	tcaatggcga	540
agtctgtgtg	gtentcaata	tcacacttgg	ccatcaccac	cttcccgtgc	tgcttggcca	600
ccatcttctc	taacctccgn	cccangatct	tcagggtcca	caccactgtg	cgtggaaatc	660
cacaaccact	gggtgtctct	gtttgaacac	tccgtcttga	aantcngtcc	ntcctgnata	720
ttaaaggttg						730

<210> 282

<211> 699

<212> DNA

<213> Homo Sapiens

<400> 282

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tggtgggtctt	ggtctgcctc	cagctcttgg	aggcagcagt	ggtcaaagtg	ccctgaaga	120
aatttaagtc	tatccgtgag	accatgaagg	agaagggctt	gctgggggag	ttcctgagga	180

cccacaagta	tgatcctgct	tggaagtacc	gctttgggtga	cctcagcgtg	acctacgagc	240
ccatggccta	catggatgct	gcctactttg	gtgagatcag	catcgggact	ccaccccaga	300
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taacctgggt	ctgtcccgtt	ggattaaggc	caccacaagc	tatntagggc	nattnggntc	660
aaggatgggt	gtcnccttat	nnagcccccg	tnctttcaa			699

<210> 283

<211> 759

<212> DNA

<213> Homo Sapiens

<400> 283

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tctatctttt	tgcacaagtt	ggatactcca	gtttcccatc	ccaacatggt	gttcgcaatg	120
tgtgagaacg	tgatgaaaga	cgatatcccc	gtttacacac	aaattcaact	gattcacctg	180
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ttaaacacat	cacttcttca	tccccaaaca	tttcataagg	gtcctacat	tgataacgta	540
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tgggcgggatt	ccacangang	tgtctctgca	tgttgggctt	cctgtccact	gctattaatg	660
catgttacat	tactggctcc	accattttgt	aatatgttgc	acaagtttta	gtccttgctc	720
accccccttat	acacatcctt	ctctctccat	gggtttggc			759

<210> 284

<211> 764

<212> DNA

<213> Homo Sapiens

<400> 284

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ttatattgaa	atggatcctc	cagctcttcc	accaaagcca	cctaagccaa	tgacttcagc	120
agttccaaca	tggaatgaag	gacagttctg	tttctcttca	ggatgcagaa	tggtactggg	180
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acaatcccaa	acttgatgtg	aagctgatgt	acccaagtgt	ccagatacca	acaggatcag	480
ttggtaaaaag	aagataatat	tgatgcagta	ngtaaaaaac	tgcaagaata	ccactctcaa	540
gtatcaggag	aagagtaaag	gagtatgata	ngctgtatga	agaatatact	agaacatccc	600
aaggaaatac	agatgaagag	gactgcaata	gaaagctttt	aatgaaaaca	ttaaaatatt	660
tggaaagaca	ntgtcacaca	caaggaaacca	acattnccaa	agaatatatt	gagnngattt	720
cncaaaaanaa	ggggaaatga	aaagggggan	ttgaacgaaa	ttta		764

<210> 285

<211> 586

<212> DNA

<213> Homo Sapiens

<400> 285
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tcttttaggct aaggaaacac catacaagca ccaacttcat tttangattc aaagctcacc 120
atccccacaa aaagaatgct attccncatc tcagagaaac aggcaggaag gacanaaggg 180
gttagttaca gtgatcaatt ttagcgtttg ctaaaacnca caaattcnag nctttttaag 240
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gctggtgaaa tgctgaancc taaattatgt tggnaagaaa caaagtacct tcanttgaag 420
gtttttttta acanctnggc ttaaattatt taaatgaaan cccaagcctc ccnatttncc 480
tttggtngcc ttttncanaa aatcccattc natcacaaaa ccctaaaaag ccttcttcgt 540
nggggggaaa aaananactg ccaaangcaa aaacaaaaac ncccaa 586

<210> 286

<211> 666

<212> DNA

<213> Homo Sapiens

<400> 286
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ggacggaaaa gaaaagttga ttacaaacgg gaccatattt tgcttcgaaa tggaccagc 120
agttagcgag ccaatgagag accaagtcgc acggactcat ttgacagagg aactcccaa 180
agtgaatgct gacatagaaa aggttaacca gaatcaggcc aagagatgca cagtgatcgg 240
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gcagtgccat gtcattcttg agggcgctga tatcaagaat ggaactgaaa gaccttccct 600
nagccattga aaccaattga cctactacac aaganactaa agatcttaca ngagaaggca 660
atttct 666

<210> 287

<211> 782

<212> DNA

<213> Homo Sapiens

<400> 287
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catgaaggaa gaaatgtctg tttttgccc cctcatcgtc acggaaaagag taggggtgcgc 120
tctctgccta gcagaaggag tcacaggctc agagcaaaact cattcaaagg atgttatttc 180
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agtggaatgt gccagccagt gcgaccgcga tgggtgtgaa ggtgggctgc agctggatga 420
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gaaagtccac caagtccctc ccaatttcca atcacgaaac ttcaacctg ccgttccctg 720
ctgcctccat gaaggatggg ttacaaactg ccgggttccc tttggggccg aaaaattgcc 780
aa 782

<210> 288

<211> 707

<212> DNA

<213> Homo Sapiens

<400> 288

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accaagtaga	atatgctttt	aaggctatta	accagggttg	ccttacatca	gtagctgtca	120
gagggaaaga	ctgtgcagta	attgtcacac	agaagaaagt	acctgacaaa	ttattggatt	180
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acaagtatgg	ctatgagatt	cctgtggaca	tgctgtgtaa	aagaattgcc	gatatttctc	360
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ctactgttcc	atcaattgan	ttcaaaccct	cagaaataga	aattgggagt	aatgacagtt	660
gaaaatccta	aattcangan	tcctacagaa	gcagagattg	atgctca		707

<210> 289

<211> 673

<212> DNA

<213> Homo Sapiens

<400> 289

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aactacgtca	cgctcatgaca	aacttaggag	aaaaactaac	agatgaagaa	gtagatgaaa	300
tgatcagaga	agcagatatt	gatggagacg	gacaagtcaa	ctatgaagaa	ttcgtacaga	360
tgatgactgc	aaaatgaaga	cctactttca	actccttttt	ccccctcta	gaagaatcaa	420
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ggtaccaggt	aagtgtccca	attcgcccta	taggggagtc	gtattacaat	tcacggggcc	600
gtcgttttta	aaacgtcntg	acgggggaaa	accctggngt	taccaactta	atcccccttg	660
caacaaatnc	ccc					673

<210> 290

<211> 573

<212> DNA

<213> Homo Sapiens

<400> 290

gcaagaggta	agtaaaagat	tcaatttgat	tcttctanag	gggggaaaaa	ggagttgaaa	60
gtaggtcttc	attttgcagt	catcatctgt	acgaattctt	canagttgac	ttgtccgtct	120
ccatcaatat	ctgcttcnct	gatcatttca	tctacttctt	catctgttag	tttttcncn	180
aagtttgtca	tgacgtgacg	tagttctgct	gcactgatat	aaccattgcc	atccttgtca	240
aagactcgga	atgcctcacg	gatttcttct	tcactatctg	tatctttcan	ttttcnagcc	300
atcatagtca	aaaattcggg	gaantcaatg	gngccattac	catcagcatc	cacttcattg	360
atcatactct	gnaattcaan	cttctgttgg	gttntgacct	antgaccnca	nggacaagtt	420
ccaagttccc	tttggttgtg	aagggtgcc	nctcgtgcc	gaattccttt	gggntccnac	480
gangggtcna	accctgcana	ggngccgcga	ancctccaan	cttttggttc	ccctttanat	540
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<210> 291

<211> 819

<212> DNA

<213> Homo Sapiens

<400> 291

aaagaagaac	tattttattat	tagagaaaagt	ccagagtcca	gaaaaagaag	gctgaatcca	60
gagtggaaag	acagatacaa	tgccctagga	gggtgcaggg	tcaagaggaa	gaggggagcc	120
cacgtgtcga	ggcagcaagt	ctaggcggca	gtggcaaagc	ctactctgtt	gttgcccaag	180
tcgtagacgg	aatagtagga	cctgaggaag	acatccccga	ggatccacag	gggctggccg	240
ttctgggagg	acaggtaggt	gggctcgact	cccacgggtgc	agtagccgtt	gttactgagg	300
atataggagg	aaggtggcag	agggaaactcc	acaccattga	tgatgaaggt	caagctgggc	360
agattctgaa	tgctgttaca	gttcacgaga	aactgtccat	actcatcctc	ctgggcccct	420
gtggcctgca	gaagagcact	catgtactgc	tggggcacag	tgagcagaga	ggtgcctgtg	480
tccacgatgg	cctggcaacc	ctcagaacac	cagccggagg	cctggccgcc	gatgaggaac	540
tcttcaatgc	caatctgcca	gtagagtcc	tgggtgacan	gcgccagta	gatctgcccc	600
gtgtacangc	tgctatccac	acccccaaag	gacaaccgct	cccccgctgg	gagccctgct	660
ggttgctgan	gtaaaccctg	aanacggggc	tggtnnaggg	cgccctcctg	cacatgccct	720
gcatactgtg	gtggcctcat	ccacggnchna	aaccanggta	aggcaaggcc	catgatgcca	780
tcaaactgcc	ataacaaatt	tgtacaaggc	tcaatccca			819

<210> 292

<211> 664

<212> DNA

<213> Homo Sapiens

<400> 292

ctcgcgctcg	cgctgggtggc	ggtcgcctgg	gtccgcgcgg	aggaagagct	aaggagcaaa	60
tccaagatct	gtgccaatgt	gttttgtgga	gccggccggg	aatgtgcagt	cacagagaaa	120
ggggaaccca	cctgtctctg	cattgagcaa	tgcaaacctc	acaagaggcc	tgtgtgtggc	180
agtaatggca	agacctacct	caaccactgt	gaactgcata	gagatgcctg	cctcactgga	240
tccaaaatcc	aggttgatta	cgatggacac	tgcaaagaga	agaaatccgt	aagtccatct	300
gccagcccag	ttgtttgcta	tcagtccaac	cgtgatgagc	tccgacgtcg	catcatccaa	360
tggctggaan	ctgagatcat	tccagatggc	tggttctcta	aaggcagcaa	ctacagtga	420
atcctagaca	agtattttta	agaactttga	taatggtgat	tctcgccctg	actccaagt	480
aattcctgaa	gtttgtggga	acangaatga	aactgccatc	aatattacaa	cgtttccagn	540
accaagggag	aacaacaagt	ttgcctaang	ggactccggg	ngttgatgcc	tctcaatttg	600
aactgggtctg	gatgaaaaat	gcctgattgg	gnaattnaag	cttcccaant	agttttncca	660
aatg						664

<210> 293

<211> 719

<212> DNA

<213> Homo Sapiens

<400> 293

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caagttaa	gcaatatana	agcctactaa	atacaaatac	aagttcacaa	acacatatgc	120
aacagaaact	tgtttanatt	gtttcttgaa	gtttgactac	ttaaaaacat	aggtgtaaag	180
gaaagacatt	cagactggtc	cacgtgggct	tgtagcagg	canaggaacc	ctgctttcca	240
aaaactgata	tagtccaaag	tcacggcatg	tgggaatgtt	tccatggaca	ctggatctta	300
acagatgcta	tagtgtttac	aaaactacac	acacagagaa	agcccaagga	agcctgcagg	360
ctaagcccta	tgcttttaga	gggctgaagg	aaccaaacct	agttttaatcc	tgtttgtttg	420
ctccatgcaa	aactttatgg	aagactcccc	agactaggct	atttagcagc	ttccatgaat	480
ggtcctcaga	tcattgtgatt	ctacggcata	nacgacagct	gccctattta	cacagaagct	540
gcagaactca	agaagaatgt	ggatttgctc	ttggganttc	aatgttgagc	ggtanantaa	600
tcttgggatg	ataaccatgt	tctaaatgac	tagtgaanaa	acctgtgggt	tcttgctttt	660
aacaaattgg	tgtactcttg	ccccctccat	aatgtccaag	ggctgggtaa	aacctttga	719

<210> 294
 <211> 762
 <212> DNA
 <213> Homo Sapiens

<400> 294
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 cagtcacaga gaaaggggaa cccacctgtc tctgcattga gcaatgcaaa cctcacaaga 120
 ggctgtgtg tggcagtaat ggcaagacct acctcaacca ctgtgaactg catcgagatg 180
 cctgcctcac tggatccaaa atccagggtg attacgatgg aactgcaaa gagaagaaat 240
 ccgtaagtc atctgccagc ccagttgttt gctatcagtc caaccgtgat gagctccgac 300
 gtcgcatcat ccagtggctg gaagctgaga tcattccaga tggctgggtc tctaaaggca 360
 gcaactacag tgaaatccta gacaagtatt ttaagaactt tgataatggg gattctcgcc 420
 tggactccag tgaattcctg aagtttgttg aacagaatga aactgccatc aatattacaa 480
 cgtatccaga ccaggagaac aacaaagtgt cttaggggac tctgtgttga tgccctcatt 540
 gaactgtctg gatgaaaatg ctgattggna actcagcttc caagagtttc tcaaagtgcc 600
 ctcaaaccct tctttcaacc ctccctgagaa agaagtgtgc cctgngaggg attaaacgta 660
 atgcagatgg agnctgagac cnaaggtgga ccngttnacc gcctgtgtcc ggtgcccggt 720
 ggaaattggg tcnngtncag ccatgaacct gttacgggaa ag 762

<210> 295
 <211> 708
 <212> DNA
 <213> Homo Sapiens

<400> 295
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 caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
 aacagaaact tgtttanatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
 gaaagacatt cagactgggc cacgtgggct tgtagcagg cagaggaacc ctgctttcca 240
 aaaactgata tagtccagag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
 acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
 ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
 ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat 480
 ggtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct 540
 gcagaactca agaggaatgt ggatttgctc ttgggagttc aatgttgagc ggtaaaagta 600
 gtccctggatg ataacctgtg tccaaatgac taagtgaaga gacactgtgg gttcctgcct 660
 ttaacaaaaa tgggggtact cctgccccct cccccanaa atgtccaa 708

<210> 296
 <211> 652
 <212> DNA
 <213> Homo Sapiens

<400> 296
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 caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
 aacagaaact tgtttanatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
 gaaagacatt cagactgggc cacgtgggct tgtagcagg cagaggaacc ctgctttcca 240
 aaaactgata tagtccagag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
 acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
 ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
 ctccatgcaa aactttatgg aagactcccc aagactaggg tatttagcag ctccatgaa 480
 tggcctcag atcaagtgat tctacggnat anacgacagc ctgccctatt tacacagaag 540
 ctgcangaac tcaagagggg atgtgggatt gcccctgggg agttcaatgg ttgcanggt 600

aaaagttant cttgggntga ataaccaggt ttctaaaatg accaaattga aa

652

<210> 297
 <211> 879
 <212> DNA
 <213> Homo Sapiens

<400> 297
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 caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
 aacagaaaact tgtttagatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
 gaaagacatt cagaactggtc cacgtgggct tgtagcagg cagaggaacc ctgctttcca 240
 aaaactgata tagtccagag tcacggcatg tgggaatggt tccatggaca ctggatctta 300
 acagatgcta tagtgtttac aaanctacac acacagagaa agcccaagga agcctgcagg 360
 ctaagcccta tgcttttaga gggctgaagg aaccaaaccct agtttaatcc tgtttgtttg 420
 ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat 480
 ggtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct 540
 gcagaactca agaggaatgt ggatttgctc ttgggagttc aatggtgcag ggtagaagta 600
 gtccgtgatg ataaccatgt tcnaaatga ctagtgaaga gacactgtgg ttccctgcct 660
 ttaacaaant ggtgtactcc ttgccctcct ccaatantgt ccaaagggct ggtaaaaacc 720
 ctttgattaa aggcgtgctg cctgttgagt tcccgaangg nacttgggac angganccg 780
 catttcaaga ccggaacaaa ttgggagttt tgaaaaaagt ttttaaantg ggaatgggtt 840
 acataaaaaan gcttgaaatg gctaaaaaca agngnggaa 879

<210> 298
 <211> 697
 <212> DNA
 <213> Homo Sapiens

<400> 298
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 gtgaaaacaa ctatggaaag tatatctaatac agtctctcac agcagaaaca 120
 aaggacatag ctttggaacc taaggaacaa aaacatgaag acaggcagag caatacacct 180
 tctcctcctg ttagtacctt ttcacacagg acttctacca ccagtgatat tgaagtttta 240
 gatcatgaaa gtgtaataag tgagagctca gcgagctcga gacaagagac tacagattca 300
 aatcaagtc ttcacttgat gcagacatct tttcagcttc tctctgcate tgcttgctct 360
 gaatataatc gtttagatga tttccaaaaa ctactgaga gttgctgttc atctgatgct 420
 tttgaaagaa tagactcatt tagtgtacag tcattagata gccggagtgt aagtgaatc 480
 aattcaagat gatgaattgt caggcaaggg gatatgcttt agtgcctatt ataagttaat 540
 tcttcaactc caaaagtcta aaacagttga atctgccgaa ggaaaatctg aagaagtaaa 600
 tgaaacatta agttatacca ctgaggaagc agaaatggga agaaaagtgg gcgaaagtgg 660
 caactccccg gttaacngng aaaangcctg gatatcc 697

<210> 299
 <211> 510
 <212> DNA
 <213> Homo Sapiens

<400> 299
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 aatacttctt ccaaactent taaatgttnt naangcctt gcnaaatcct tataaataaa 120
 ttttcnccct tatccaancn catcnanaaa acattgaata tggtcagggt tcnnggann 180
 ggtncnnaaa ggnncnctt tttatacnga cttaattgtn aaagcngggg gaaataaatt 240
 ttcnactcna aatttttttt aagtttaaat cnttccnctn ttaaatttct nanagtgtcc 300
 gtgtnactcc tactttttaa ggaaaaaaat tantttaaaa ttaatancc cccgatttaa 360

taatttttta	ctttaacnncn	taatgttctnt	tttcctgaac	nntaattaan	aaatgttgaa	420
atttttaa	atg tnaaanantc	caantttccg	tntgttaaca	ttacncctcc	aatgttctnta	480
atata	tntnt taaccctnnc	caattatnga				510

<210> 300
 <211> 625
 <212> DNA
 <213> Homo Sapiens

<400> 300						
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tgcttttagtg	cctattatag	ttaattcttc	aactccaaag	tctaaaacag	ttgaatctgc	120
tgaaggaaaa	tctgaagaag	taaatgaaac	attagttata	cccactgagg	aagcagaaat	180
ggaagaaagt	ggacgaagtg	caactcctgt	taactgtgaa	cagcctgata	tcttggtttc	240
ttctacacca	ataaatgaag	gacagactgt	gttagacaag	gtggctganc	agtgtgaacc	300
tgctgaaagt	cagccanaan	cactttctga	caaggaanat	gtttgcaata	cagttgaatt	360
tctgaatgaa	aaagcnggaa	aaaagggang	ctcagttatt	atctcttagt	aaggaaaaag	420
cacttctagg	aagaagcttt	ttgatacctg	aananatgaa	atgttcacag	tngaaaggaa	480
naanngcagt	ancatttccn	tccttgaaan	gattnngttt	actcaaagga	attngnnnaa	540
ncngtanta	gaaaagtttc	aaacctaagn	ccggnaaaag	aggaagagat	gcctggccta	600
aaaaaaggga	aatccacnga	ccatt				625

<210> 301
 <211> 792
 <212> DNA
 <213> Homo Sapiens

<400> 301						
aaaaantaaa	ttatnttaaa	aactttatta	tttncnatnc	attttatagg	gtantaaaat	60
aatactnctn	caaaatcatt	taaatnttat	tgatgccatt	gcaaaatcat	tataaataaa	120
tttntctccat	tatccaatca	catctaaata	acattgaata	tntacagggt	nctctggata	180
ggtaccaaaa	ggtaccacnt	tttatacaaa	cttaattgtg	aaanctgggt	gaaataaatt	240
tncaaatcaa	aatTTTTTTT	aantttaaat	catncactct	ttaaattttca	aacagtgtca	300
gtgtgacnct	tactttttaa	ggaaaaaaat	tagttttaa	tttaatancc	acanatttaa	360
taatttttta	ctttaacact	taatgtacat	tttcatganc	agtaattaaa	atatnttgaa	420
attttaaatn	tgaaaaat	caaagtttca	gtatnttaac	attacncttc	aaatgttctt	480
aatatatata	taaacactta	caaattataa	atacaactag	ttgtntntct	acaatacata	540
tntgaacacc	attctttcttc	tctagccatn	tttatntgan	gataaagtaa	taaatctctg	600
tgctattcaa	gggaaaaaaa	atgaatgctt	taaaaaataa	atcttttaaa	aataattcca	660
aaaataaagt	tcaaataattg	cacaaaaata	atttaactgt	aaatattact	ncntagtgta	720
aacaatttta	aaaaaatttt	acactctaca	ntaaatccnc	ttctnattct	ttaaaaaaat	780
tatgggaaat	cc					792

<210> 302
 <211> 738
 <212> DNA
 <213> Homo Sapiens

<400> 302						
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aatacttctt	caaaatcatt	taaatgttat	tgatgccatt	gcaaaatcat	tataaataaa	120
ttttctccat	tatccaatca	catctagata	acattgaata	tgtacagggt	tcnctggata	180
ggtaccaaaa	ggtaccacat	tttatacaga	cttaattgtg	aaagctgggt	gaaataaatt	240
ttcagatcaa	aatTTTTTTT	aagtttaaat	cattcactct	ttaaattttca	gacagtgtca	300
gtgtgactct	tactttttaa	ggaaaaaaat	tagttttaa	tttaatagcc	acagatttaa	360

taatttttta	ctttaacact	taatgtacat	tttcatgagc	agtaattaag	atatgttgaa	420
attttaaatg	tgaagattt	caaaggtttc	agtatgttaa	cattactctt	caaagtgtct	480
taatataat	ataaacactt	acaaattata	gatacaacta	gttgatatatc	tacaatacat	540
atatgaacac	cattcttctt	ccccnagcca	tatttatatg	agggataaag	taataaatct	600
ctggtgctat	tcaaggnaaa	aaaatggaat	gccttaaaaa	aataaaatcc	ttaaagaata	660
ggttcaaaaa	ataaagttca	aaatantngc	ccaaaaaata	attaacnngg	taatattaac	720
tacataaggg	taaaacaa					738

<210> 303

<211> 635

<212> DNA

<213> Homo Sapiens

<400> 303

gaacggccga	gggtaacatc	cggggctcgc	gggaggtgt	cggggtaatg	gccacacgct	60
gacagaacca	gccgagtggg	aaaggggagc	gaagccgttc	ctctgcaccc	ttccccaggg	120
ctgaggcctt	cccgtttggt	gctgccgcgc	ccactgccgg	ctgaggaggg	gcgatgagtt	180
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ctattgacag	ggttctggac	atccaggaag	aggagccgag	catctgggcc	gagaccattc	300
cgtatggaga	gccgggaata	agttcccctg	tcagtggagg	atgggatact	tcaacctggg	360
ggttgaaatc	aaacactgaa	cctcagagtc	caccaatagc	ctctcctaaa	gcaatcacia	420
agccagttcn	gaggactgtg	gtcgatgaat	ctgaaaattt	cttcagtggc	tttctctcgc	480
caactgatgt	ccagaccatt	cagaagagtc	cagtgggtatc	aaaacctcca	ncataatcac	540
aacnaccang	nagaangaan	tgaaaancan	cttacatgaa	tccttgccaca	ttggncannt	600
caagaaactt	cctgaaacaa	ctgaaatcac	aaagt			635

<210> 304

<211> 847

<212> DNA

<213> Homo Sapiens

<400> 304

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taacctccac	ctcccagggt	caagcaatgc	tcctgcctca	gcctcccagag	tagctaggat	120
tacaggcgca	caccaccacg	ccaggctaata	ttttgtatct	ttagtagaga	tggggtttca	180
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aggttttaaa	cacaacctgg	ttaccttttt	gaataaaaata	acattttggaa	gaaggcatag	420
ctacttttaa	aagctattct	atgctttcct	tgtgtttgaa	atttcaagaa	aaaataaaaat	480
gataaatcac	aaaattaaaa	atgccaaatt	caagttaatt	octataattc	ttccattttg	540
ttatgaatat	tctgtaatat	caaacattca	tttttaattg	gctaaaaata	tgggtttaca	600
aaatatgaac	aggtaatttt	taaaagagta	aattatgtta	aagaacttta	ataantttcg	660
attcatttta	tagggtaanta	aaataatact	tcttcaaaaat	caattaaatg	ttattgaatg	720
ccatttgcaa	aatcattata	aataaatttt	cncaattatc	caatcacaaat	tctagataac	780
attgaataag	tncaagggtt	ccccgggata	ngttccaaaa	nggtncacaa	attttatnca	840
gacctaa						847

<210> 305

<211> 767

<212> DNA

<213> Homo Sapiens

<400> 305

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tgctcggggta	atggccacac	gctgacagaa	ccagccgagt	ggaaaagggg	agcgaagccg	120
ttcctctgca	cccttcccc	ggcctgaggc	cttcccgtt	ggtgctgccg	ccgccactgc	180
cggctgagga	ggggcgatga	gttggttcaa	cgctcccag	ctctccagct	tcgctaagca	240
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gagcatctgg	gccgagacca	ttccgtatgg	agagccggga	ataagttccc	ctgtcagtgg	360
aggatgggat	acttcaacct	gggggttgaa	atcaaact	gaacctcaga	gtccaccaat	420
agcctctcct	aaagcaatca	caaagccagt	tcggaggact	gtggtcgatg	aatctgaaaa	480
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gaatcccttg	cacattggcc	aatcaagaac	tcctgaaaca	actgaatcac	aagtaaaaag	660
actccctcct	tgtgtgtttc	aaggggaaaa	ctctgggcaa	caaggctact	catcacctaa	720
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<210> 306

<211> 1659

<212> DNA

<213> Homo Sapiens

<400> 306

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<210> 307

<211> 831

<212> DNA

<213> Homo Sapiens

<400> 307

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<210> 308

<211> 833

<212> DNA

<213> Homo Sapiens

<400> 308

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gagacgactg	actgtgacag	gggccgggga	gctcttcaag	gggccgtttt	cttcaagtct	180
cggatctgtt	taatcaagta	gttcttctcg	tcagcgaact	gctcatcatc	cgctctttct	240
ttttggaagc	tgctcagaaa	ctcaatgagt	ttgggctgat	tttttaacag	gatctccaca	300
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togaatanat	tcctctcaag	cataaaccca	caaacgttaa	ggnaaacccg	tgggggcttc	780
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<210> 309

<211> 1320

<212> DNA

<213> Homo Sapiens

<400> 309

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ccgtgcagag	actgggtgct	tcagaagctg	ctgcatttga	cagtgcagaa	tcggaagcag	480
tgggtgcgac	ccgaattcag	attgccttga	agtatgatga	gaagaataag	caatttgcaa	540
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<210> 310

<211> 1030

<212> DNA

<213> Homo Sapiens

<400> 310

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ccaaaatgac	aggttcagca	ccacccctt	ctccaacacc	taacaaagag	atgaagaaca	180
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agaccaaate	ttgtcagaca	gatgatactt	ggaggacaga	atatgttcca	gtgcctatcc	300
ctgtgacctg	gtatatccca	gttcctatgc	acatgtacag	tcagaatatt	cctgttccta	360
ctacagttcc	tgttcctgtg	ccagttcctg	tttttctgcc	tgctccattg	gacagcagtg	420
agaagattcc	tgagcaatt	gaggagctaa	aaagcaagg	ttcttcagat	gctcttgata	480
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acccagagac	acagtccagc	atgcctgatg	taccatata	accaagattt	ggatatcgaa	660
atagattttc	ccagagctgc	tgaggagctt	gatatggaaa	atgaattttt	attaccacct	720
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<210> 311

<211> 546

<212> DNA

<213> Homo Sapiens

<400> 311

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gctaaaataa	aaagcacaga	aggaaaaaat	aattgatttg	tacataagct	aaattataat	180
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gtttatatga	atatgttggt	aacagtgaga	tttctgatat	ggtataacaa	agtatatgat	300
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gcaagtggag	cttaacagca	ttatggttca	ttacnggggt	tgggntatat	acctttttca	420
gcttctgtna	tgagcaagtt	gtgtttttcaa	tccccacttt	caatgtctat	gggaagggcg	480
cnttttgcctn	tgttttgttt	tgtcttttaa	nenttttnaa	acngggggaca	canatggang	540
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<210> 312

<211> 518

<212> DNA

<213> Homo Sapiens

<400> 312
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 ctgggaaana attgggggtct ggaataaanc tncaaatggg tcnccngctt cactaaaacc 180
 ttggcaacta aggtctcattt ttccaaaggg gtttctnang tcnctccct ntnaaatcnt 240
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 ctntctgctgc tgttgcctgc gggcantnca agggaaaacc ccccgacaa actgggataa 360
 ngtgacctgn ttgcnacnt ctngggccct attnccntac ctgnccctgna aatncttccc 420
 nctctgcccc ctttactnnt gccaanctt tcccccccg ttaggataaa aattccctn 480
 aacctccnac ctttggttan cgggggtccc ctncccc 518

<210> 313

<211> 660

<212> DNA

<213> Homo Sapiens

<400> 313
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 gtgcttcaga agctgctgca tttgacagt acgaatcgga agcagtgggt ggcacccgaa 180
 ttcagattgc cctgaagtat gatgagaaga ataagcaatt tgcaatatta atcatccagc 240
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 agaagacctt aagagtcgat gtctgtacca ccgacaggag ccatctggga aaagtgcctg 480
 ggaggcgcgc aaatnagcct ggcgagggtc tgccggtctg ggggaaaagt cgactcgctn 540
 gtacaacctt ctcagctaca aatacttgaa gaaacaagac aangggactc aagccantgg 600
 gagtcatggg ccttggcctc angggctgcc aacaacgggc cccgtgttct ggccccgttt 660

<210> 314

<211> 516

<212> DNA

<213> Homo Sapiens

<400> 314
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 aggtgctta gccacccag cctatcacac tgcccgtctc acgttgggca gccacataaa 180
 aacacgtcac agctcaanaa natecgtgga tgcacctctg aatccccccc aatggtttct 240
 gtgcattttt ttaatatgtt acaaaatatg ttaactagga aaaattagct gtactgtgac 300
 aagtgcggga cgtcctatta ggattaccgt cccccaggca ttacttctta ttgcagtaag 360
 acctctaaaa ggtggagctg tncaaacc aaataatcta aacgatttta agaanaagcag 420
 caactcaata ctgctttagt tcattttaaat tttctttccc aaaaatacac tcttaaatat 480
 acaaactata caatcttatt attttaatgc tgggtt 516

<210> 315

<211> 677

<212> DNA

<213> Homo Sapiens

<400> 315
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 aaatttggtc tcaaaacaaa tatactcatt tcaaagaact tccaactctt ctccactgtg 180
 cagcaaaaatt tggcttaaag aacctggcta ttcatttgc tcaatgttca ggagcaacct 240

gggcatctaa	gatgaaaaat	atggagggtt	cagaccccac	acatattgct	gaaaggcatg	300
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<210> 316

<211> 843

<212> DNA

<213> Homo Sapiens

<400> 316

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gtcttaatac	aaaggtaggt	tatgaaaatg	tatattaatt	tgagatatag	aaaagttttc	180
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ctacttaaaa	agcaaaaatg	tgctaagtaa	atttgtattt	tcattggttat	tctaaggaga	360
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caagaaccta	ttgctgaatt	ttcatataaa	actatttctt	gttggcagtt	tctaccccc	840
gga						843

<210> 317

<211> 835

<212> DNA

<213> Homo Sapiens

<400> 317

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cttcaaaggc	atctcaggag	gatgccaatg	aaatcaagtc	taaacgggat	gaagaagaac	180
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<210> 318

<211> 582

<212> DNA

<213> Homo Sapiens

<400> 318

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canagctcac	caagttcn	ccgtatcaaa	tttccanaat	acccacaaga	tttcttcacc	180
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atttaaaatt	antcnantcc	caagaaat	aaagacttga	agtagtagag	cattcaaaac	300
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aaactttgng	cccatagaca	acttattttt	taaaatatca	ctccccaaaa	gtagccatgt	540
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<210> 319

<211> 827

<212> DNA

<213> Homo Sapiens

<400> 319

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<210> 320

<211> 598

<212> DNA

<213> Homo Sapiens

<400> 320

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acacaaactc	cttacaacaa	acaagcttat	ctagatgggtc	ccacgagctg	gtcatcttca	300
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<210> 321

<211> 808

<212> DNA

<213> Homo Sapiens

<400> 321

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gttcctctct	ctcctccccc	tccccaccct	gttccccctct	catggctgac	cccctcctgg	180
ctggtgatgc	cttcctcaac	tccttggagt	ttgaagaccc	ggagctgagt	gccactcttt	240
gtgaactgag	ccttggtaac	agcgcccagg	aaagataccg	gctggaggaa	ccaggaacgg	300
agggcaagca	gctggggcaa	gctgtgaata	cggcccaggg	gtgtggcctg	aaagtggcct	360
gtgtctcagc	cgccgtatcg	gacgagtcag	tggctggaga	cagtgggtgtg	tacgaggctt	420
ccgtgcagag	actgggtgct	tcagaagctg	ctgcatttga	cagtgcgaa	tcggaagcag	480
tgggtgcgac	ccgaattcag	attgccctga	agtatgatga	gaagaataag	caatttgcaa	540
tattaatcat	ccagctgagt	aacctttctg	ctctgttgca	ncaacaaaga	ccagaaagtg	600
aatatccgcy	tggctgtcct	tccttgcctc	gaaaagcaca	aactgcctgt	tccgggaccc	660
gggctctgga	cgcctcaaac	actccaagtg	ttcaatgaag	gtgttctggg	tatccatggt	720
ccctatccaa	accntttaac	aagaaagacc	tttaanaaag	tccaatgtcc	ngtnaccaac	780
cggacaaggg	agccaatctt	gggaaaaa				808

<210> 322

<211> 629

<212> DNA

<213> Homo Sapiens

<400> 322

agcaaaaataa	atgtcactat	atcaagataa	agaataacat	taggtgtgaa	ctagcatagg	60
tgattcatgg	gaaacgaaat	ggcaaattcg	aaaggaattc	tgggaaccat	cgtactaggt	120
tacattgcct	ttttgcctgt	agagaaccca	tgaggagagg	ggttctcagc	cttcccagtg	180
gaacccttct	cttagttgca	ctggcattgg	gggatctcat	tgctgggcct	aggtccaggc	240
agggcagctc	ctggggccca	agggcgggct	cactcaccag	ctgtcttcca	gtgtctgtgt	300
gctgctcctg	ccctcctgcc	tcttctccaa	ctccactgct	gtctgttcca	acagagcaag	360
acacagcgtc	cgtgctggca	ngccctgaag	caagggccat	gactcccact	ggcttgagct	420
ccctgctctg	tttcttcaag	tattttgtan	ctgagaaagt	tgtaccaanc	gaatcnacct	480
ctccccaaaga	ccgggaagac	ctcccgcocaa	ggctgatttg	gggcgcctcc	caagcactct	540
tccaaaatgg	ctcccgctcg	ttgggaacana	catccnactt	tttaangcct	tccggggnaa	600
agggctgggn	taaggacatt	gggtncccc				629

<210> 323

<211> 798

<212> DNA

<213> Homo Sapiens

<400> 323

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ccaaaatgac	aggttcagca	ccacccctt	ctccaacacc	taacaaagag	atgaagaaca	180
aagcagttct	ttgcaaacct	ttaacaatga	caaaagctac	ttactgtaaa	cctcacatgc	240
agaccaaate	ttgtcagaca	gatgatactt	ggaggacaga	atatgttcca	gtgcctatcc	300
ctgtgcctgt	gtatatccca	gttcctatgc	acatgtacag	tcagaatatt	cctgttcccta	360
ctacagttcc	tgttcctgtg	ccagttcctg	ttttcttgcc	tgtccatttg	gacagcagtg	420
agaagattcc	tgcagcaatt	gaggagctaa	aaagcaaggt	ttcttcagat	gctcttgata	480
cagagttgct	tacaatgacg	gatatgatga	gtgaagacga	ggggaaaaca	gagacaacca	540
acatcaacag	tgtaattatt	gaaacagata	taattgggtc	agaccttttg	aagaactctg	600
acccagagac	acagtccagc	atgcctgatg	taccatgatga	accagatttg	gatatcgaa	660
tagattttcc	cagagctgct	gaaggagcct	tgatatggga	aaatgaattt	ttattaccaa	720
ccngtttttg	ggcgaaagaa	tatgaaggaa	caagcccaaa	cctcgattct	aaaaaaaaag	780

ggagccaagg agaaaagg

798

<210> 324
 <211> 754
 <212> DNA
 <213> Homo Sapiens

<400> 324
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 cattacagta caccaatatt gacagcattc tcttgtctat ttttggtaca gaagatggta 120
 tctctctaca taaccttgta aggcttcagt aactaaaatg taaaaccaa caaaacaaaa 180
 ccccaaaaaca aaacaaaaac cccagcctat tagtttacag tttattttta aaattccgaa 240
 agacactgca agttctaaac ttttagtagt gctaccata cacaaccatc tgggtaagaa 300
 cccagtaaaa gagccccctt ccaaggaagc tttgcaacag tagagttgtg caatatggat 360
 gtttcttact acaagaaaaa aattatacat ggcacattct cattcatatt ctgtaatgta 420
 aaaagttaca aacataccta atcaataaaa taataataaa aaaagaattt gaatgtattt 480
 gttaagtatc ctaaaaccac tacatagaat aatggcaact ttcactcaca gattatttac 540
 atggtaatac ccagcgtggg tacactgcta caaaactcaa aacagaagga gtaaacttga 600
 aatgttttcc ataataaaga tctagcanca tgactatcct aatgccgttt tatcccgaa 660
 gcttctggca acgttccctt ttaatccggt gtctcatcca attcaaaaan tggcctttac 720
 caaaaaatat ctttttaca gaaagaaacc cggt 754

<210> 325
 <211> 854
 <212> DNA
 <213> Homo Sapiens

<400> 325
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 caaaatgtca ggaattggaa ataaaagagc agctggagaa cctggcacct ccattgcctcc 120
 tgagaagaag gcagctgttg aagattcagg gaccacagt gaaacaattt agctaggagg 180
 tgtctcttca acggaggaac tagacattag aacactgcaa accaaaaatc gcaagctggc 240
 agaaatgttg gatcagcggc aggccattga agatgaactt cgtgagcaca ttgaaaaact 300
 ggaacgacga caggccactg atgatgcctc actattgatt gtcaaccgat actggagtca 360
 gtttgatgaa aacatccgta tcatccttaa acgttatgat ctggagcagg gcttgggaga 420
 cctactcaca gaacgaaaag cccttggtgt gctgaacca gaaccagact ctgatagcaa 480
 tcaggagcgt aaagatgacc gagagagagc agttccagt aagagatgga gtctcagctg 540
 caggaacgtg tggagtcttc ccgccgagcc gtgtcccaga ttgtgactgt ttatgataaa 600
 ttgcaagaaa aagtggagct cttatcccgg gaagctaaac agtgggagat aatctgatag 660
 tggaggggaag canttgcaag gagctgaact ctttccctgc acaaggagaa tattaaggct 720
 acanggaatt gacaagatct tctcaggaa aaagcatcgc aaccatgggc tcaaggngct 780
 cctccaaagt tgcaagaggt aaaattgggg naaaagccga attcaccaan tttccggctc 840
 tggaaagtcca anga 854

<210> 326
 <211> 760
 <212> DNA
 <213> Homo Sapiens

<400> 326
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 cagaattttc tggaaaagag ggatcacaa aaccctgtaa aaaggagact gagagtaatt 120
 catagctcac caagttctct ccgtatcaaa tttccagaat acccacaaga tttcttcacc 180
 agctcagtc tgactcaacc ttttcaatct ttatttcatt agaagacaaa gggatcatatt 240
 atttaaaatt attctagtct caagaaattt aaagacttga agtagtagag cattcaaaac 300

ttaaataact	ttaacaagaa	agccagctga	tcttaacaag	ttactctgct	agtaaattggg	360
aaatagactg	aatcaticcta	gacataatct	cattagggct	gcaaaccacc	caggggagag	420
tagcacaatt	ataccatttt	gtaateccaca	ttcacaagaa	gtttgctaca	caaatgaaga	480
aaactttgtg	cccatagaca	acttattttt	taaaatatca	ctccccaaaa	gtagccatgt	540
ttccactttt	gttccctttt	ccacatcaaa	aataccaact	tgattttcttc	aggaggaatg	600
gacaatccaa	gtttatacaa	gtgggctggg	aaaaagaaaa	cactgaaaag	tctaaaagca	660
caagataaac	aaagcctggg	aagggagagc	agttaagagt	tatttggtttc	caantcaatc	720
cnaaaaccca	anggcttgta	attaacaagt	cctttccggc			760

<210> 327

<211> 852

<212> DNA

<213> Homo Sapiens

<400> 327

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gcagacccaa	tcttgctcaga	cagatgatac	ttggaggaca	gaatatgttc	cagtgcctat	120
ccctgtgcct	gtgtatatcc	cagttccctat	gcacatgtac	agtcagaata	ttcctgttcc	180
tactacagtt	cctgttctctg	tgccagttcc	tgtttttctg	cctgctccat	tggaacagcag	240
tgagaagatt	cctgcagcaa	ttgaggagct	aaaaagcaag	gtttcttcag	atgctcttga	300
tacagagttg	cttacaatga	cggatatgat	gagtgaagac	gaggggaaaa	cagagacaac	360
caacatcaac	agtgttaatta	ttgaaacaga	tataattggg	tcagaccttt	tgaagaactc	420
tgacccagag	acacagtcga	gcatgcctga	tgtaccatat	gaaccaagat	ttggatatcg	480
aaatagattt	ttccagagct	gctgaggagc	ttgatattgga	aatgaattt	ttattaccac	540
ctgttttttg	cgaagaatat	gaggaacagc	ccaagacctc	gatctaaaaa	aaaaggggagc	600
caagagaaan	gctgtatcaa	ggataccaag	tctcatgatg	ataagtctga	caatttcaga	660
atgcagcntt	cctttcaaat	tatacgtatg	ggcgtaaatg	catgggnaac	accgggtcaa	720
aaactaagnn	acttggtatga	aagatcntcc	gggnaattag	aatgagttaa	aatccttcca	780
aatccantna	agttttaaag	agggtnntaat	cccctcaaaa	ccanagctgg	ngccttaaca	840
aggggggttaa	cc					852

<210> 328

<211> 799

<212> DNA

<213> Homo Sapiens

<400> 328

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tctctctaca	taaccttgta	aggcttcagt	aactaaaatg	taaaacccaa	caaaacaaaa	180
ccccaaaaca	aaacaaaaaac	cccagcctat	tagttttacag	tttatttttaa	aaattccgaa	240
agacactgca	agttctaaac	ttttagtagt	gtcaccata	cacaaccatc	tggttaagaa	300
cccagtaaaa	gagccccctt	ccaaggaagc	tttgcaacag	tagagttgtg	caatatggat	360
gtttcttact	acaagaaaaa	aattatacat	ggcacattct	cattcatatt	ctgtaattga	420
aaaagttaca	aacataccta	atcaaataaa	taataataaa	aaaagaattt	gaatgtattt	480
gttaagtatc	ctaaaaccac	tacatagaat	aatggcaact	ttcactcaca	gattattttac	540
atggtaatac	ccagcgtggg	tacactgcta	caaaactcaa	aacagaanga	gtaaacttga	600
aatgttttcc	ataataaaga	tctagcaaca	tgactatcca	atgctgtttt	atcccgattg	660
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taacctttac	tagaagaaac	cgtncaagca	tattttcaan	gggtttccgg	tccaattgaa	780
gttanacgtn	taccaaaca					799

<210> 329

<211> 978

<212> DNA

<213> Homo Sapiens

<400> 329

ggaagatggc	ggcggccggt	ccacagcggg	cgtggaccgt	ggagcagctg	cgcagtgagc	60
agctgcccac	gaaggacatt	atcaagtttc	tgcaggaaca	cggttcanat	tcgtttcttg	120
cagaacataa	attattagga	aacattaaaa	atgtggccaa	gacagctaac	aaggaccact	180
tggttacagc	ctataaccat	ctttttgaaa	actaagcgtt	ttaagggtag	tgaaagtata	240
agtaaaagtg	ctgagcaagt	aaaaaatgtg	aagcttaaat	gaagataaac	ccaaagaaac	300
caagtctgaa	gagaccctgg	atgagggtcc	cccaaaatat	actaaatcct	gttctgaaaa	360
aggagagata	aaccaacttt	cccaaaaagg	gagatgttgt	tcactgctgg	tatacaggaa	420
cactacaaga	tgggactggt	tttgatacta	atattcaaac	aagtgcacaa	aagaagaaaa	480
atgccaagcc	tttaagtttt	aaggctcgag	taggcaaagt	tatcagagga	tgggatgaag	540
ctctcttgac	tatgagtaaa	ggagaaaagg	ctcgactgga	gattgaacca	gaatgggctt	600
acggaaagaa	aggacagcct	gatgccaaaa	ttccnccaaa	tgcaaaactc	actttttgaag	660
tgggaattagt	ggatattgat	tgaaatagca	gtgcttcagc	tctaaggata	ttagcaacaa	720
tgataaaact	tggccttgaa	gaaatttact	caactagtta	gaacttggtt	ctattgtaaa	780
ggaagagtca	actggaaaat	tcaaggagtt	aataaaaatt	gtttacttgg	tcccagcttt	840
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actggtcaag	gagaactttt	tcctttttacc	tcattgttga	aacttaagtg	gctcaataaa	960
aattgatecn	ctgtcttg					978

<210> 330

<211> 1017

<212> DNA

<213> Homo Sapiens

<400> 330

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caggagacct	ggaccagacc	acgatgtgga	aacgctggct	cgcgctcgcg	ctcgcgctgg	120
tggcgggtgc	ctgggtccgc	gccgaggaag	agctaaggag	caaatccaag	atctgtgcca	180
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tctgcattga	gcaatgcaaa	cctcacaaga	ggcctgtgtg	tggcagtaat	ggcaagacct	300
acctcaacca	ctgtgaactg	catcgagatg	cctgcctcac	tggatccaaa	atccagggtg	360
attacgatgg	acactgcaaa	gagaagaaat	ccgtaagtcc	atctgccagc	ccagttgttt	420
gctatcagtc	caaccgtgat	gagctccgac	gtcgcacatc	ccagtggctg	gaagctgaga	480
tcattccaga	tggctgggtc	tctaaaggca	gcaactacag	tgaatccta	gacaagtatt	540
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aacagaatga	aactgccatc	aatattacaa	cgtatccaga	ccaggagaac	aacaagttgc	660
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gtgccttgga	ggatgaaacg	tatgcagatg	gagctgagac	cgangtggac	tgtaaccgcg	840
tgtgtctgtg	cctgtggaaa	ttgggtctgt	cagccatgac	ctgtgacnga	aagaatcaga	900
agggggccca	gacccagacn	gaggangaga	tgancngata	tgtccaggag	ctccaaaagct	960
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<210> 331

<211> 799

<212> DNA

<213> Homo Sapiens

<400> 331

cccagaaaga	tcattcacagt	ttctgtaaaa	gaagatgtac	acctgaaaaa	ggcagaaaaa	60
gcttggaagc	caagccaaaa	acgagacagc	caagccgatg	atcccgaaaa	cattaaaaacc	120
caggagcttt	ttagaaaagt	tcgaagtatc	ttaataaaat	tgacaccaca	gatgttcaat	180
caactgatga	agcaagtgtc	aggacttact	gttgacacac	aggagcggct	gaaaggagtt	240

attgacctgg	tctttgagaa	ggctattgat	gaacccagtt	tctctgtggc	ttacgcaaac	300
atgtgtcgat	gtctagtaac	gctgaaagta	cccatggcag	acaagcctgg	taacacagtg	360
aatttccgga	agctgctact	gaaccgttgc	cagaaggagt	ttgaaaaaga	taaagcagat	420
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acaaggcttc	atgatgaact	ggaagaagcc	aaggacaaag	cccggcggag	atccattggc	540
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cagtacttta	atcagatgga	gaaaattgtg	aaaggaaaaga	aaaacctcat	ctaggatcgg	780
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<210> 332

<211> 881

<212> DNA

<213> Homo Sapiens

<400> 332

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caggagacct	ggaccagacc	acgatgtgga	aacgctggct	cgcgctcgcg	ctcgcgctgg	120
tggcggtcgc	ctgggtccgc	gccgaggaag	agctaaggag	caaatccaag	atctgtgccca	180
atgtgttttg	tggagccggc	cggaatgtg	cagtcacaga	gaaaggggaa	cccacctgtc	240
tctgcattga	gcaatgcaaa	ctcacaaga	ggcctgtgtg	tggcagtaat	ggcaagacct	300
acctcaacca	ctgtgaactg	catcgagatg	ctgcctcac	tggatccaaa	atccaggttg	360
attacgatgg	acactgcaaa	gagaagaaat	ccgtaagtcc	atctgccagc	ccagttgttt	420
gctatcagtc	caaccgtgat	gagctccgac	gtcgcacatc	ccagtggctg	gaagctgaga	480
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aacagaatga	aactgccatc	aatattacaa	cgtatccaga	ccaggagaac	aacaagttgc	660
ttaagggact	ctgtgttgat	gctctcattg	aactgtctga	tgaaaatgct	gantggaaac	720
ttagctttca	agaagtttct	caagngcctt	naacccatct	ttnaaccttc	ttgagaagaa	780
tgtgcccttg	gaggatgaaa	cgtatgcca	atggagcttg	aaancgaggt	ggactgtaan	840
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<210> 333

<211> 810

<212> DNA

<213> Homo Sapiens

<400> 333

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atgcctgcct	cactggatcc	aaaatccagg	ttgattacga	tggacactgc	aaagagaaga	180
aatccgtaag	tccatctgcc	agcccagttg	tttgctatca	gtccaaccgt	gatgagctcc	240
gacgtcgcac	catccagtg	ctggaagctg	agatcattcc	agatggctgg	ttctctaaag	300
gcagcaacta	cagtgaatc	ctagacaagt	attttaagaa	ctttgataat	ggtgattctc	360
gcctggactc	cagtgaattc	ctgaagtttg	tggaaacagaa	tgaactgcc	atcaatatta	420
caacgtatcc	agaccaggag	aacaacaagt	tgcttagggg	actctgtgtt	gatgctctca	480
ttgaactgtc	tgatgaaaat	gctgattgga	aactcagctt	ccaagagttt	ctcaagtgcc	540
tcaacccatc	tttcaaccct	cctgagaaga	agtgtgccct	ggaggatgaa	acgtatgcag	600
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agggagcccc	caaagagatt	atgaggaggc				810

<210> 334

<211> 808
 <212> DNA
 <213> Homo Sapiens

<400> 334
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 aacagaaaact tgttttagatt gtttcttgaa gtttgactac ttaaaaaacat aggtgtaaag 180
 gaaagacatt cagactgggc cacgtgggct tgtagcagg cagaggaacc ctgctttcca 240
 aaaactgata tagtccagag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
 acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
 ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
 ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat 480
 ggtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct 540
 gcagaactca agaggaatgt ggatttgctc ttgggaagtt caatgttgca gggtaaagta 600
 agtcttgat gataaccatg ttctaaatga ctagtgaaga gacactgnng tttcttgctt 660
 ttaacaaatt gnggactct tggcccttct tcccatagnng tccaagggtc ggtaaaacct 720
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 atttcaaact ggaccaagtg gaggtttg 808

<210> 335
 <211> 758
 <212> DNA
 <213> Homo Sapiens

<400> 335
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 agagaagacc aggtgtccag agagtggacg aaggtgggtg gaacactgta caaggggcca 180
 agaacagtcg ggtactggac cctcaaaaat tcttaaaaat cactaagcct acaattgatg 240
 aaaaaattca gctggtacct aaagcacagc taggcagctg gggaaaaggc agcagtgggtg 300
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 ctgccctgca acctccagca cctcagggt ccacgccatc cacgcctgta gagtttgatt 420
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 acaatcagtc tcaagaagag cagcggagag agatgctgga gaccgtgaag cagctnacan 600
 gaggtgtgga tgtggagagg aacagccttg agctgaaccg aaataaaca gggagtcagc 660
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<210> 336
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 <212> DNA
 <213> Homo Sapiens

<400> 336
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 tctggactaa atgctatacc ttaaaacaaa catgaggngc atcttgaagg ggaggggaaat 420
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 actggcattt gcagtcctta aaataaatta aaagttctca actttttttt ttttgctaaa 540

cattttttta	agtatgagtc	cttgttttaa	aagaaaagat	taaaacagaa	aatattttct	600
ataaatacnt	gnattttggg	tttaagggct	cccgccttaa	ggnttggaagg	ttacttttat	660
cccaggaccc	tttttccctc	atggaacccc	tttttttenc	ttttcccttt	tcccacttcg	720
ngccnccnt	nggggggttc	tggcaaaaaa	tggcccttgc	tgcncctggg	aattggccaa	780
aaacc						785

<210> 337

<211> 643

<212> DNA

<213> Homo Sapiens

<400> 337

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cagaacataa	attattagga	aacattaaaa	atgtggccaa	gacagctaac	aaggaccact	180
tggttacagc	ctataaccat	ctttttgaaa	actaagcgtt	ttaanggtac	tgaangnta	240
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aagtntgang	agaccctgga	tgaggggtcca	ccnaaatata	ctaaatctgn	tctgaaaaag	360
ggagataaaa	ccaactttcc	caaaaaggga	gatgttggtc	actgctggta	tacaggaaca	420
ctacaagatg	ggactgtttt	tgataactaat	attcaaacaa	gtgcaaagaa	naagaaaaat	480
gccaagcctt	taagtttttaa	ggtcggagta	cgcaaaagtt	atcanaggat	ggggatgaag	540
ctctcttgac	tatgagtaaa	ggagaaaagg	ctngactgga	aaatggaccc	aaaatggcct	600
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<210> 338

<211> 831

<212> DNA

<213> Homo Sapiens

<400> 338

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gctgtccttt	ctttccgtaa	gcccattctg	gttcaatctc	cagtcgagcc	ttttctcctt	420
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cagtcccatc	ttgtagtgtt	cctgtatacc	agcagtgaac	aacatctccc	tttttgggaa	600
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ttgctcagac	actttactta	tactttcagt	acccttaaaa	ccgcttaagt	ttcaaaaaag	780
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<210> 339

<211> 758

<212> DNA

<213> Homo Sapiens

<400> 339

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cagtagctgt	cagagggaaa	gactgtgcag	taattgtcat	acagaagaaa	gtacctgaca	180
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tgatgaccgg	aatgacagct	gacagcagat	cccaggtaca	gagggcacgc	tatgaggcag	300
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ccgatatttc	tcaggtctac	acacagaatg	ctgaaatgag	gcctcttggg	tgttgatga	420
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tagtgacagt	tgaaaatcct	aaattcagga	ttcttacngg	aagcagagat	tgatgcttac	720
cttgtgnttt	agcngagagg	agacttaacc	attggcgg			758

<210> 340

<211> 840

<212> DNA

<213> Homo Sapiens

<400> 340

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caacaagggtg	agcatcaatc	tctgcttctg	taanaatcct	gaatttagga	ttttcaactg	240
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atgtaattgc	agtttccact	gtctgttcaa	atgtccaatc	aaatttcttc	ttcacttttt	360
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nccaataatt	tggcaggnac	ctttctttct	ggggngacaa	ttactggccc	agtcttttcc	780
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<210> 341

<211> 793

<212> DNA

<213> Homo Sapiens

<400> 341

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aacagaaact	tgtttanatt	gtttcttgaa	gtttgactac	ttaaaaacat	aggngtaaag	180
gaaagacatt	canactgggc	cncgngggct	tgntagcagg	cagaggaacc	ctgctttcca	240
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acagatgcta	tagggtttac	aaaactacnc	acncagagaa	agcccaagga	agcctgcagg	360
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ctccatgcaa	aacttttttg	aaactcccc	agactaggct	ttttancagn	nttccattga	480
atggggcnnc	aaancnttgg	gaatttttacg	gntnaaancn	aaagntngcc	ttntttnccc	540
ccgaaagctt	tgaaaaactt	ttcagngggg	atnggggaat	ttggnttntt	ggggnngttc	600
aattgttncc	ngggtaaaaa	ganacccttg	gggaggnaaa	cccctgngtt	tnaannggcc	660
ttaggggaaa	naaccnttgg	gggtntcntt	ggntttttta	caaaattggg	gggncntttt	720
ggnccttcc	cccaaaaggg	ggcccanggn	ctgnggaaaa	aaccttttgg	antaaggggg	780
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<210> 342

<211> 906

<212> DNA

<213> Homo Sapiens

<400> 342

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cagtagctgt	cagagggaaa	gactgtgcag	taattgtcac	acagaagaaa	gtacctgaca	180
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ttgaaaaaaa	agtgaagaag	aaatttgatt	ggacatttga	acagacagtg	gaaactgcaa	600
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agcctctccc	actcctccta	ccaccgaagt	ggttaggact	ctatataaat	aaaacaaggg	900
ttttgg						906

<210> 343

<211> 875

<212> DNA

<213> Homo Sapiens

<400> 343

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tgcacatcac	tggcagagaa	ctgagggtcca	aaatagctga	aacctttgga	cttcaagaaa	180
atttatatcaa	aattgtcata	aataagaagc	aactacaact	agggaaaacc	cttgaagaac	240
aaggcgtggc	tcacaatgtg	aaagcgatgg	tgcttgaact	aaaacaatct	gaagaggacg	300
cgaggaaaaa	cttccagtta	gaggaagagg	agcaaaatga	ggccaaactc	aaagaaaaac	360
aaatttcagag	gaccaagaga	ggactagaaa	tactggcaaa	gagagcagca	gagacagtgg	420
tggatccaga	aatgacaccg	tacttagaca	tagctaacca	gacaggcaga	tcaatcagaa	480
ttcccccatc	agaaagaaaa	gcccttatgt	tagctatggg	atatcatgag	aagggcagag	540
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attttctgtga	gtgttgctga	gagctgctgg	acacagtggg	taactatgcc	cgtcttcagc	660
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aaaaattaac	ttggnccaga	aatgctttta	aaattgggtc	ggagaaactn	tcgaaactgg	780
tccccntaaa	nggaattgtg	gggaaaagag	aangtctggt	tctaagactn	tacttacttt	840
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<210> 344

<211> 629

<212> DNA

<213> Homo Sapiens

<400> 344

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cgcatgatcc	atcctgtctt	cagtcagtgc	cttctggaag	ggagggaaaag	tcttggtatgc	180
acctggcact	caatccactc	ggcacctggc	tgtctgtcgc	gtcctggggc	tggaaaggac	240
tcccactggg	cacacatcta	cagaggagtg	cgtggcgag	tgaggacggg	tactgctgga	300
gccgacacac	agcgaactac	atacttttag	aaagagcctc	tgtcacatgg	ctagaacaac	360
aacaacaaca	aagaaaaccc	acaaaaaac	tggagaaaat	atatctaaat	ctctgatagg	420

tctcttagct	agcagtgagt	tcagtatgac	agcacagagt	ctaaaaatat	taattaaaaa	480
taaattgctt	tggtttagcat	ttaaaccctt	cccattcaat	agaagatttc	tgtaatgagg	540
aatgctgaat	atatataaag	cctgccactc	aatctttgaa	tttcnggggg	cgcaatttta	600
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<210> 345

<211> 724

<212> DNA

<213> Homo Sapiens

<400> 345

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ctttcatttt	aaaaagttat	atttaatttt	tgggggcctt	aattaaaatt	taacatttaa	180
ccatgngtnn	tttttttgta	aacagtctac	atgtcaacaa	atggataagg	gttaacaaag	240
gcaaatnctg	acttcatttg	tgttttaaac	acgattatat	gaatttttct	tttttaatta	300
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tttaaataatg	ggtagatcaa	gacaagtaat	gttggnaatc	tcttatcttg	catagaaaag	420
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accaggcctt	attaagagca	gagaccccca	tcaccttcta	taacacgatt	gcagtgggaa	660
gcaaacatca	ccaaatagct	gggttatagn	gagtttcaca	atatgccag	gcctttcctt	720
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<210> 346

<211> 907

<212> DNA

<213> Homo Sapiens

<400> 346

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<210> 347

<211> 711

<212> DNA

<213> Homo Sapiens

<400> 347

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ccagtttcaa	agtaaaactg	ttacgancat	nttcactnnc	aaacttctca	tattcnccac	660
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<210> 348

<211> 862

<212> DNA

<213> Homo Sapiens

<400> 348

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gctgagcctt	caggcgatcc	atctctatct	ggctactggc	cactgnggct	ttgnattcct	660
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<210> 349

<211> 832

<212> DNA

<213> Homo Sapiens

<400> 349

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aacaaaatta	ttttttaaaa	aagcaaaaaga	ataaagaata	tatacaaaaag	ggacctggaa	180
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gaggtgtgtc	tatacataaa	cttcagtcac	ttttgcttgt	gcagaatcat	cccaatcttc	360
ccaagactga	atgggcagtc	ctgtggcttt	cttctttttc	catattccca	acaaggctac	420
gtgaagttca	actcttgatg	agccgcttac	aacagcagtt	ccttaggagc	caacatgaca	480
gggtgggtcag	atttccctat	gagaaacaaa	actggccacc	tacagcaaaa	tatcaaaatg	540
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cccagaacat	ctcaatatcc	ctggccagta	caattcaagt	gnactgggta	caggcccata	780
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<210> 350
 <211> 782
 <212> DNA
 <213> Homo Sapiens

<400> 350
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 natttttttaa aaaagcaaaa naataaanaa tatatncaaa ngggaccngn aatcngnaag 180
 cngatnccaa aaccnaaata agtaaaaaan ccanggggaa nccngancat tcnacctnng 240
 nttngnaaaa gggctatcat ncaacattca gncagntgaa nanggatngg nanaggnggg 300
 ncnatncata ancttcagnc attttngctn gggcaaaatc atcccaatnt tcccaanact 360
 gaanggnacag cccnggggct ttcttccttt nccanattcc caacanggnt acnggaagtt 420
 caactntnga nganccgttt acaacagcag ttccttagga nccancatga caggggggnc 480
 aaattttcct atgagaanca aaacnggccca cctacagcaa aatatcaaaa ggggnaagnc 540
 ctctcttctt ctctctccng attatatnca ccatatctcc tttcangact atnatttcca 600
 tcaggetnat tcttccacaa atntaaacct tgaggggata tgaaggaaacc caacttcngg 660
 aaangaaaac tcaattcana aattgaagaa acctggcagg tataacaatac cccccaggn 720
 catntcaana tccctggcac aagnnccaat tcagggncct ggtaccagcc ccatagaana 780
 aa 782

<210> 351
 <211> 775
 <212> DNA
 <213> Homo Sapiens

<400> 351
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 tgagaccaca ggagttgaca tcaactaaaat tcaagtcaag agatgtgaga ccatgagaga 180
 gaagcacatg cagaaacagc aggagaggga aaaatcagtc ttgacacctc ttcggggaga 240
 tgtagcatct tgcaataccc aagtggcaga gaaaccagtg ctactgctg tgccaggaat 300
 cacacggcac ctgaccaagc ggcttccac aaagtcatcc cagaagggtg aggtagaaac 360
 ctgagggatt ggagactcat tattgaatgt gaaatgtgca gcacagacct tggaaaaaag 420
 gggtaaaagct aaacccaaag tgaacgtgaa gccatctgtg gttaaagttg tgtcatcccc 480
 caaattggcc ccaaaacgta aggcagtgga gatgcacgct gctgtcattg ccgctgtgaa 540
 gccactcagc tccagcagtg tccacagga acccccagcc aaaaaggcag ctgtggctgt 600
 tgteccgctt gtctctgagg acaaatcagt cactgtgcct gaagcagaaa atcctagaga 660
 cagtctttgt gcttgncttc aaccagtcct ttnttcagat tctttacccc cagaggtgtc 720
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<210> 352
 <211> 865
 <212> DNA
 <213> Homo Sapiens

<400> 352
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 tatttttttaa aaaagcaaaa gaataaagaa tatatacaaa agggacctgg aatctgtaag 180
 gtgattccaa aaacgaaata agtagaaaat ccatggtgaa acctgaacat tctacctctg 240
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 gaatgggcag tctgtgtggt ttcttccttt tccatattcc caacaaggct acgtgaagtt 420
 caactcttga tgagccgctt acaacagcag ttccttagga gccaacatga caggtgggtc 480

agatttccct	atgagaaaca	aaactggcca	cctacagcaa	aatatcaaaa	tgggtaagtc	540
cttccttccct	cttcctcctg	attatataca	acatatctcc	tttcaagact	attatttcca	600
tcatgcttaa	tncttccaaa	tctaaacctt	gaggngatat	tgaanggaaa	cccaccttca	660
nggaaaagaa	aacctcaatt	tcagaaaatgg	aagaaaaact	ggcaggggtat	accaatacac	720
ccccccagag	cattttttaa	atatccctgg	ncacaagtnc	caattcaagg	gnacctgggt	780
ccggnccata	gaataaaaana	ntgggcactt	tggaaaaaag	cnccattttt	ttcccttcag	840
gggggggttaa	aaggggcccc	aaacc				865

<210> 353

<211> 875

<212> DNA

<213> Homo Sapiens

<400> 353

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caaaattatt	ttttaaaaaa	gcaaaaagaat	aaagaatata	tacaaaaggg	acctggaatc	180
tgtaagctga	ttccaaaaaac	gaaataagta	gaaaatccat	ggtgaaacct	gaacattcta	240
cctctgcttt	ggagaagggc	tatcatataca	cattcagtc	gctgaagatg	gattggtaga	300
ggtgtgtcta	tacataaaact	tcagtcattt	ttgcttgtgc	agaatcatcc	caatcttccc	360
aagactgaat	gggcagtcct	gtggctttct	tcctttttcca	tattcccaac	aaggctacgt	420
gaagttcaac	tcttgatgag	ccgcttataca	cagcagttcc	ttaggagcca	acatgacagg	480
tgggtcagat	ttccctatga	gaaacaaaac	tggccaccta	cagcaaaaata	tcaaaatggg	540
gtaagtcctt	ccttctctt	cctcctgatt	atatacaaca	tatctccttt	caagactatt	600
atttccatca	tgcttattcc	ttccaaatct	aaaccttga	ggtgatatga	aggaaaccaa	660
catcaagaaa	aagaaaactc	aattcagaaa	atgaagaaaa	ctggcagggg	tacaatacac	720
ccccagagca	tcttcaatat	ccctgggca	cagtncccaa	ttcagggact	gggtacaggc	780
ccataagaat	naaataattg	ggcagctttg	gaataaagcc	tcattttttt	cccttcaggn	840
gggttaaagg	ggccccccaa	accaaaaact	ggggc			875

<210> 354

<211> 705

<212> DNA

<213> Homo Sapiens

<400> 354

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caaaattatt	ttttaaaaaa	gcaaaaagaat	aaagaatata	tacaaaaggg	acctggaatn	180
tgtaagggtga	ttccaaaaaac	gaaataagta	gaaaatccat	ggtgaaacct	gaacattcta	240
cctctgcttt	ggagaagggc	tatcatataca	cattcagtc	gctgaagatg	gattggtaga	300
ggtgtgtcta	tacataaaact	tcagtcattt	ttgcttgtgc	agaatcatcc	caatcttccc	360
aagactgaat	gggcagtcct	gtggctttct	tcctttttcca	tattcccaac	aaggctacgt	420
gaagttcaac	tcttgatgag	ccgcttataca	cagcagttcc	ttaggagcca	acatgacagg	480
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taagncttct	cttctcttct	ctnctgatta	tatacnncat	atctcctttc	aagactatta	600
tttccatcat	gcttattcct	tccaaatcta	aaccttgagg	ngatatgaan	ggaaaccaca	660
tcaggaaaaag	gaaactcaat	tccgaaatga	ngaaaactgg	caggt		705

<210> 355

<211> 862

<212> DNA

<213> Homo Sapiens

<400> 355

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cgctgcgac	caagctgtca	tcacaggaga	tccagcagtt	tgcagcactg	ctgcacgagt	120
accgcaatgg	ggcctctatc	cacgagttct	gcatcaacct	gcggcagctc	tacggggaca	180
gccgcaagtt	cctgctgctt	ggtctgaggc	ccttcacccc	tgagaaggac	agccagcact	240
tcgagaactt	cctggagacc	attggcgtga	aggatggccg	cggcatcatc	actgacagct	300
ttggcaggca	ccggcggggc	ctgagcacca	catccagttc	caccaccaat	gggaacaggg	360
ccacgggcag	ctctgatgac	cggtcggcac	cctcagaggg	ggatgagtgg	gaccgcatga	420
tctcggacat	cagcagcgac	attgaggcgc	tgggctgcag	catggaccag	gactcagcat	480
gatggacagt	ggatgggggg	gcacccacac	cttcgcgcga	gtcgtcatag	gccttcccag	540
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ggctggggccc	ttggacggct	gtcagttttg	cacatgatgt	tcctattgta	actntcagag	840
accttaaaaa	gaagtttact	gc				862

<210> 356

<211> 750

<212> DNA

<213> Homo Sapiens

<400> 356

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cgctgcgac	caagctgtca	tcacaggaga	tccagcagtt	tgcagcactg	ctgcacgagt	120
accgcaatgg	ggcctctatc	cacgagttct	gcatcaacct	gcggcagctc	tacggggaca	180
gccgcaagtt	cctgctgctt	ggtctgaggc	ccttcacccc	tgagaaggac	agccagcact	240
tcgagaactt	cctggagacc	attggcgtga	aggatggccg	cggcatcatc	actgacagct	300
ttggcaggca	ccggcggggc	ctgagcacca	catccagttc	caccaccaat	gggaacaggg	360
ccacgggcag	ctctgatgac	cggtcggcac	cctcagaggg	ggatgagtgg	gaccgcatga	420
tctcggacat	cagcagcgac	attgaggcgc	tgggctgcag	catggaccag	gactcagcat	480
gatggacagt	ggatgggggg	gcacccacac	cttcgcgcga	gtcgtcatag	gccttcccag	540
aaggagctgc	cagacctgcg	tgtcaaccct	ttggtggtgg	cagggagagg	cgcccgggtgc	600
agatggcccc	gggcggggcc	aagtccctcta	ctgtgaagga	acagggagct	tgccgangga	660
cacgaacctc	aatgcggggg	tggaangctc	tttggcttgt	ccaccaaggc	ttagcccagc	720
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<210> 357

<211> 725

<212> DNA

<213> Homo Sapiens

<400> 357

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acagccgtcc	aaggggcccag	ccgacaggac	tggctctccc	tgcccgtctg	gccgggcccct	120
ccccgagcgg	ggacacactg	cagggcttgg	ctganccctg	gtggacaagg	caaagagcct	180
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atgtcgtctg	tgatgtccga	natcatgcgg	tcctactcat	ccccctctga	gggtgcccag	480
cggtcatcag	agctgcccgt	ggccctgttc	ccattggtgg	tggaactgga	tgtggtgtctc	540
agggcccgcgc	ggtgcctgcc	aaagctgtca	gtgatgatgc	cgcggccatc	cttnacgccca	600
atggtctnca	ggaagtcttc	gaantgctgg	ctgncccttn	tcagggatga	anggccttan	660
accaagcagc	anggaacttg	cggnttntcc	ccgaaaanct	tgcencaggt	tgatgcaaaa	720
acttc						725

<210> 358
 <211> 813
 <212> DNA
 <213> Homo Sapiens

<400> 358
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 ataaaaaacg cagtgaattt ccttggtatt gggaaaatca gccaacagga tgtcaaaaat 180
 taaactgcgc tttccatcac aatagaggac gatatgttga tggccttttc ctacctccga 240
 gcaaaactgt gttgcccact gtgcctgagt caccagaaga ggaagtgaag gctagccaac 300
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 atgctgcaga tgatgatgaa gatgatgatg atcagttttc tgaggaaggt gatgaaacca 480
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 aggaaattaa gtcaaagaaa atgaaggaaa aatctaagaa gcaagggtgag ggttcttcag 660
 gagtttccag tcttttactt cacccttgag ccccgntcca ngctctgaaa aagaaaatgt 720
 caaggactgt ggtgangaca gtactntttt caccaaccaa ggagaagaac ccttggttag 780
 atgagtctta ctgagagact ggggaaacca aaa 813

<210> 359
 <211> 756
 <212> DNA
 <213> Homo Sapiens

<400> 359
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 tagaagagaa aaaacgtgcc atgcaagaga caaagataaa aggggaaaag gtagaacaga 180
 aatagaagg gaaatgggta aatgaaaaga aagcacaaga agataaactt cagacagctg 240
 tcctaaagaa acagggagaa gagaagggaa ctaaagtgca agctaaaaga gaaaagctcc 300
 aagaagacaa gcctaccttc aaaaaagaag agatcaaaga tgaaaagatt aaaaaggaca 360
 aagaacccaa agaagaagtt aagagcttca tggatcgaaa gaagggattt acagaagtta 420
 agtcgcagaa tggagaattc atgaccacaa aacttaacaa tactgagaat actttcagcc 480
 gccctggagg gagggccagc gtggacacca aggaggctga gggcgcccc caggtggaag 540
 ccggcaaaaag gctggaggag ctctcgtcgtc gtcgcgggga gaccgagagc cgaagagttc 600
 gagaagctca aacagaagca gcaggaggcg gctttggagc tggaggaact caaggaaaaa 660
 ganggaggag agaaggaagg tcctgganga ggaagagcag aggaaggaac aggaggaaaag 720
 ccgatcgga aaccttcaag aggaggaaga agaaga 756

<210> 360
 <211> 706
 <212> DNA
 <213> Homo Sapiens

<400> 360
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cctaccttta	agccagcagt	ttnccttatt	tggggngcc	ctgctgcant	gggggatga	660
aaacncattt	cctttntcca	catactcttg	aaggttgccg	tacacc		706

<210> 361

<211> 726

<212> DNA

<213> Homo Sapiens

<400> 361

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ctgntgctgc	cagcgcgagg	ccgcaagacc	cgccacgacc	cgctggccaa	atccaagatc	120
gagcgagtga	acatgcgcgc	cgcggtggac	cctgcggagt	tcttcgtgct	gatggagcgt	180
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cggatagcga	ggctgcggca	ggaggancgg	nagcaggagc	agtgncaggc	ggtggagcan	420
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ccacaacgca	nggacttcta	agggcccagt	aaggacagtg	cccggcaggg	accatgtatg	660
tatcatggcg	gaagagttgc	ccttgactgg	aattaaagca	attggtgttg	cttatgagga	720
aaggtt						726

<210> 362

<211> 747

<212> DNA

<213> Homo Sapiens

<400> 362

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acatgctagt	cagctngcag	ttttacctcg	taaagatanc	aganaattat	agncaaacca	180
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gactttgtaa	cgcanatgtc	acttttaaatg	ccagccctgc	cctggtttagc	ncttctggag	660
gaatactgca	gataagaaaa	atagttattt	gggaggctcc	ctcagngggg	tanggaattg	720
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<210> 363

<211> 1227

<212> DNA

<213> Homo Sapiens

<400> 363

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gaccaccaa	tggtgccagc	aaggaaatac	cagaattgga	agaagaaaaa	acaattccta	180
ccaaagagcc	tgagcagata	aatcagaat	acaaggaaga	aagatgcaca	gagaagaatg	240

aagatcgctca	tgcactacac	atggattaca	tacttgtaaa	ccgtgaagaa	aattcacact	300
caaagccaga	gacctgtgaa	gaaagagaaa	gcatagctga	attagaattg	tatgtagggt	360
ccaaagaaac	agggctgcag	ggaactcagt	tagcaagctt	cccagacaca	tgtcagccag	420
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gatcatcttt	tgaaagccct	gcacaagacc	agagttggat	gttcttgggc	catagtgagg	540
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gaatggacat	cccctttgaa	gagggcgtgc	tgagtcccag	tgctgcagac	atgaggcctg	960
aacctcctaa	ttctctggat	cttaatgaca	ctcatcctcg	gagaatcaag	ctcacagccc	1020
caaatatcaa	tctttctctg	gaccaaagtg	aaggatctat	tctctctgat	gataactttg	1080
gacagtccag	atgaaattga	catcaatgtg	gatgaacttg	ataccccga	tgaagcagat	1140
tcttttgagt	accctggccc	atgaagaatc	ccacagccac	aaagattctg	gccaagaag	1200
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<210> 364

<211> 831

<212> DNA

<213> Homo Sapiens

<400> 364

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tctgaggagt	ccgtctcccg	cctcccggag	gagatccgga	gactggagga	agagctccgc	180
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acccgtggaa	tcaactccaga	aggtgcagga	acaggtgcac	acgctgctca	gtcaggacca	600
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cctgaaagcc	tcagtccagg	cagtggaaagc	cggacttgaa	aatgctcaag	aactgctgtg	720
gacaagttgg	gtgcataact	cggtcaaaat	tagaaaccaa	cgagnacaat	tttggaaatca	780
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<210> 365

<211> 785

<212> DNA

<213> Homo Sapiens

<400> 365

acttgaaatc	tgccagccag	acaggatttc	tgaggttaat	ctgcttctgt	taatcctcaa	60
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caggggctgc	gcttcaggaa	accaaccaa	tgcagaagca	gagaacttaa	atattgtaaa	180
taagttaact	gggcatgaaa	atacaatgcc	ttggtgttca	ggtggtgaca	actgctcttt	240
aagaggggac	aagaaattgg	ggggtagggg	acacatggga	aaaaaccaca	catttttttg	300
tcatgagaaa	ttggacttta	aatccgcgcc	ctgcacacgc	aattcattta	gaccttttcg	360
tgaatcttct	ccactttcac	aaacaacct	tccagatcat	tcctcaggtc	atctagtaaa	420
cccttggtcg	attccagatt	gttctcgttg	gtttctatct	tgaccgagta	tgcaaccaa	480
ctgtccacag	cagtcctgag	catttttcaag	tcgcctccca	cttggctgac	tgaggctttc	540
aggttggtcta	gagaagaaa	tctgtccagg	aagtcctgag	gaggcagacg	ggcggcctgg	600

gcttggtcct gactgagcag cgtgtgcacc tgctcctgcc ctttctggga gtgattccac	660
ggtgctgggg agctngccca cacttctctt tcagcttctt ccacgtcacc cgtaaaagca	720
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<210> 366
 <211> 816
 <212> DNA
 <213> Homo Sapiens

<400> 366	
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atagttaggt tgggtgatcca tcaactggatg ccagggactc agggcctggg tggctctggca	180
agactgtgga gccgttctct gaactcggct tgggtgaggg tccccagctg cagattctgg	240
aagaaatgaa gcctctagaa tcttttagcac tagaggaagc ctctgggtcca gtcagccaat	300
cacagaagag taagagccga ggcagggctg gcccggtatg agttacccat gacagtgaat	360
gggaaatgct ttcaccacag cctgttcaga aaaacatgat cctgacacg gaaatggagg	420
aggagacaga gttccttgag ctcggaacca ggatatcaag accaaatgga ctactgtcag	480
aggatgtagg aatggacatc ccttttgaag agggcgtgct gagtccagt gctgcagaca	540
tgaggcctga acctcctaata tctctggatc ttaatgacac tcatctctcg agaatacagc	600
tcacagcccc aaatatcaat ctttctctgg accaaagtga aggatctatt ctctctgatg	660
ataacttttg acagtccaga tgaaattgac atcaatgtgg atgaacttga taccctcgat	720
gaagcagatt cttttgagta cctggccca tgaagaatcc cacagccaca aagattctgg	780
cccaagaagt cagagtctat ttcnggaata taccgg	816

<210> 367
 <211> 803
 <212> DNA
 <213> Homo Sapiens

<400> 367	
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ttcaaagatg gagagaggct ttggaagttg aggaaagtgg ctcatatgac ctcttaataa	180
aatgtgaaga atatgatgga gagcatgact gtatgttctt ggatccacca tactcaagag	240
ttattacaca aagggaaaca gaaaataacc aaatgacatc agaaagtgga gccacagcag	300
gaaggcaaga agtggataac accttttgga atggctgtgg agattattac caactctatg	360
acaaagatga agatagttct gaatgcagt atgggggaatg gtctgcttct ttgctcctac	420
gattttcttg tacagaaaaa gatcaatcct caagtgatga aagctgggag actctgccag	480
gaaaagatga gaatgaacct gagctacaaa gtgatagcag tggcctgaa gaagaaaacc	540
aagaattatc tcttcaggaa ggggaacaga catccttgg agagggagaa attccttggt	600
tacagtacaa tgaagtcaat gaaagcagca gtgatgaagg gaaatgaacc tgccaatgaa	660
tttgacagc cagctttcat gttggatggg aacaataacc tggangatga cttccgtgtg	720
aagtgaagac ttatagatgtg attggagcct attttgatgg ctttgcaaat gggcctagga	780
gttgctggaa gctttttcat aag	803

<210> 368
 <211> 809
 <212> DNA
 <213> Homo Sapiens

<400> 368	
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tgcatccat	tttaacaatt	cgtatgtatc	taacaaatac	ataaatccag	atcacaaata	180
atcttaagag	ttaaacaatt	aagaaacaca	aagaatacca	catagatcta	cctttaaata	240
tcagcattca	tattataaga	aataagaaaa	tgtaaaaaaa	ataaaattag	gttaagtcac	300
aacataaaat	agagaaataa	gataaatgct	atttttattaa	tattcatact	tattttctaata	360
ttaccttcat	atagtcttaa	cTTTTTcaaa	aggatccaag	atatgatcaa	ataatatTTT	420
agtatctgaa	cttgccagcc	ttagcttata	ccagagcttg	ttaccatgaa	aatcctaaaa	480
cctcaatttt	ctTTTTcttt	tttaaaattt	aagccaactc	ttattcaact	tttcttcttc	540
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aaaaccctct	taacaactgg	cagataatag	cttaaactct	tacaggccaa	ggaagaaata	720
ttttctttgg	ggacagctgn	tatctagaag	aaaaccctang	ggccttttaa	tataggccta	780
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<210> 369

<211> 826

<212> DNA

<213> Homo Sapiens

<400> 369

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gaccaccaa	tggtgccagc	aaggaaatac	cagaattgga	agaagaaaaa	acaattccta	180
ccaaagagcc	tgagcagata	aaatcagaat	acaaggaaga	aagatgcaca	gagaagaatg	240
aagatcgta	tgcactacac	atggattaca	tacttgtaaa	ccgtgaagaa	aattcacact	300
caaagccaga	gacctgtgaa	gaaagagaaa	gcatagctga	attagaattg	tatgtagggt	360
ccaaagaaac	agggctgcag	ggaactcagt	tagcaagctt	cccagacaca	tgctagccag	420
cctccttaaa	tgaaagaaaa	ggtctctctg	cagagaaaat	gtcttctaaa	ggcgatacga	480
gatcatcttt	tgaaagccct	gcacaagacc	agagttggat	gttcttgggc	catagtgagg	540
ttggtgatcc	atcactggat	gccagggact	cagggcctgg	gtggtctggc	aagactgtgg	600
agccgttctc	tgaactcggc	ttgggtgagg	gtccccagct	gcagattctg	gaagaaatga	660
acctctagaa	tcttttagcac	tagangaagc	ctntgggtcca	gtcagcccat	cacaggaaga	720
gttagaacc	gagggcanggc	tgggcccggg	tgcagtaccc	cntgacagtg	gaatgggnaa	780
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<210> 370

<211> 783

<212> DNA

<213> Homo Sapiens

<400> 370

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cagacacttt	attctgagca	atccaatgca	tgatagaaaa	accttttagat	atataaaaaga	180
ttaattttgtg	cacatctaaa	tgtttctaag	ggaacaaact	actgaggcat	tgtgataaga	240
cgagagttag	aaacatagta	ccataactga	atatttataaa	ttacatctta	acaaaggcta	300
ggagttagtga	cttcctcaca	cacctcagag	aatgtcttag	agagtaaccc	catagaacat	360
tgtatggctt	caacagaaac	ttcaggattt	tcttcacac	tgagctactg	ccctcaaaca	420
aacttttctca	ctccttgaca	ctatcttctg	tgcaaatttc	tgttctttct	cttaatacaag	480
gagcttttag	aaacaatgct	tttgccccaa	tgacccttg	gttcccttaa	ctacagatct	540
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aagagctaga	gagctaaatc	atgtgaatgg	ttacctctgn	ctacctatct	gcttanggat	660
tatttttcta	nggattcatc	taggattcta	tttaccttgg	gggtgaaatg	gacatggtag	720
cttttcttta	gccccatgcc	aattaaaatt	naatttgggc	ntttaaagaa	taattaaaat	780
tgc						783

<210> 371
 <211> 793
 <212> DNA
 <213> Homo Sapiens

<400> 371
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 gtaatgagct gtgttcatcc cttgtgcac ccgaattgag tgaggtcagt tctaacgttg 120
 caccaagcat cctccagta atgtcaagac ctgttagctc ttctccatt tccactccct 180
 tgccccaaa tcaaataact gtatttgtca cttccaatcc catcacaact tcagctaaca 240
 catcagcagc tttgccaact cacttgcagt ctgcattgat gtcaacagtt gtcacaatgc 300
 ccaatgcggg tagcaagggt atggtttctg agggacagtc agctgctcag tctaattgcc 360
 ggctcagtt cattacacct gtctttatca attcatcctc aataattcag gttatgaaag 420
 gatcacagcc aagcacaatt cctgcagccc cactgacaac caactctggc ctgatgcctc 480
 cctctgttgc agttgttggc cctttacaca tacctcagaa cataaaattt tcttctgctc 540
 ctgtaccgcc taatgccctc tccagtagtc ctgtccaaa catccagaca ggtcgacctt 600
 tggtccttag ctacagagcc accctgttc agcttcttc ccttcttgn cgtcttctnc 660
 agttgccctt ctnatccctt gtgcaacaag tgaaagaatt gaatncagat gangctagcc 720
 ctnangtgaa caccttaaca gatcagacac ttttctctt tncagtcaac cccaatgggt 780
 tcttcccttt tga 793

<210> 372
 <211> 804
 <212> DNA
 <213> Homo Sapiens

<400> 372
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 cccactactg ctattcacac acagtacttc cacggcacia tacattagga gatctaaaaa 180
 tgctcaccct gtactctagg ctgcttagga aatgtgaaaa ctagtaacat ttataatggc 240
 attagctcct ttcaatacaa gacaacattt tagaaacctt gaacttcaac tcgcaacacc 300
 aaaagggctc aacagtctg ctttcccat tgcactttat gaaacagggt gcagggacta 360
 ggaaaagggc cacattatta aaattactaa ctgtacagaa attgatttaa aaaagtcaca 420
 gctcaaaatt gctctttgta aaagtcacac acatttccaa gtatcaagtc gcagtcctgc 480
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 ccacagtttg ctcttcagtt cgggagtttc ttcggcctgg gatttggact tttcaactat 660
 ctctttgggc tcactgcttt gtccagagac tatggcagca tttacctcg ctttgggctg 720
 gcaacagang cctgcaatgc tgnnggttga agttctctt gagactaaat tctggcgacn 780
 gggctttgct gggggttaaag ttct 804

<210> 373
 <211> 792
 <212> DNA
 <213> Homo Sapiens

<400> 373
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 cggaggacag cctcctggcc gccgaagagg ccgcccgcga ggctgaagcc gacgtagctt 180
 ctctgaacag acgcattccag ctggttgagg aagagttgga tcgtgcccag gacgtcttgg 240
 caacagcttt gcagaagctg gaggaagctg agaagggcag agatgagagt gagagaggca 300
 tgaaagtcac tgagagtcga gcccaaaaag atgaagaaaa aatggaaatt caggagatcc 360
 aactgaaaga ggcaaagcac attgctgaag atgccgaccg caaatatgaa gaggtggccc 420

gtaagctggg	catcattgag	agcgacctgg	aacgtgcaga	ggagcgggct	gagctctcag	480
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taatggctgc	agaggataag	tactcgcaga	aggaagacag	atatgaggaa	gagatcaagg	600
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agaagaaaan	cttatatgca	tcaanatgct	ggatcagact	ttactggagt	taaaccacat	780
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<210> 374

<211> 745

<212> DNA

<213> Homo Sapiens

<400> 374

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acaaccaatt	ttacctgact	ttgatcctgc	tcttggaatg	atgactggaa	ttccaccaat	180
aactccaatg	atgcctgggt	tgggaatagt	acctccacca	attcctccag	atatgccagt	240
agtaaaagag	atcatacact	gtaaaagctg	cacgctcttc	cctccaaatc	caaattctccc	300
acctcctgca	acccgagaaa	gaccaccagg	atgcaaaaca	gtatttgtgg	gtgggtctgcc	360
tgaaaatggg	acagagcaaa	tcattgtgga	agttttcgag	cagtgtggag	agatcattgc	420
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gcgtncacca	tnntcacccc	cagtgggtcac	tatttagatc	atgaatgcag	cattgggtgct	720
gaaaaaataa	aaggaggatt	ccaaa				745

<210> 375

<211> 734

<212> DNA

<213> Homo Sapiens

<400> 375

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atttacaaaag	tattttttgtg	aaatactctc	cattggcttt	gcttgctcag	tacattcttt	120
tatcttcaat	tgagactcaa	gggaggggtat	gcttgcatta	ttataaatac	cacaaccacc	180
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tgtttgtgcg	tgtgtgcca	cacatgagca	tatttttaatt	cacagaaaaa	ctgaaacatg	660
ccctccttta	aaagcagact	atttacaagt	gattctgaat	agcatgaaca	catgccagnc	720
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<210> 376

<211> 822

<212> DNA

<213> Homo Sapiens

<400> 376

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accacctcga	caagcaacag	gttcaactcc	tggcagagat	gtgtatcctt	attgatgaaa	120
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aaggattatt	gcacgagct	tttagtgtct	tcttattcaa	caccgaaaat	aagcttctgc	240
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gaatggggaa	tatgtaggta	aatggattac	ccgaaaaaan	ttatctgntt	aacaaactta	780
gaaaggcttt	ttncctttta	aattaagttc	tatcattaaa	tt		822

<210> 377

<211> 812

<212> DNA

<213> Homo Sapiens

<400> 377

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tcttgagggt	tcaaactctga	gatatctatg	gcaagtttat	aaaaagtaca	ttgatcaagg	120
tacaattttt	aacattaata	tacacattcc	ataatctcat	ctattttaaca	ttaacacagg	180
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ctcagttggg	ggttgactct	gtcccttagg	ggcatctggc	aacatccggc	ataactgtgg	300
gtgtcacatg	agaggggacgc	tgctcaccat	cctgcaatgc	acagcacaga	ccccaccaca	360
ggggttttat	ccagcccaaaa	tgtcaacagt	gtcaagttta	agcaactctt	accgagtggg	420
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gctaactggg	aaatactatt	tacaagaaga	ttcaacctaa	tcaatatcac	ttatcaaaaag	540
cagtggctga	ctgtaagtat	caacatgttt	ccagaatgaa	taaaccacac	aatcaactca	600
gaatgatata	aattaggggtc	catatcattt	aatttccctt	gaacctgtct	tgctaggtta	660
atctgctaata	atgaaaagta	attaagactg	gttttgaagg	accgaggaca	atagtttctt	720
ttgcacaatt	ttctgaaacta	tgagaaaaat	ttaaaggatc	cntaaagcnc	ctggcaaaaa	780
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<210> 378

<211> 870

<212> DNA

<213> Homo Sapiens

<400> 378

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gttcagctct	caacattgct	ggttgagttt	ggaaccaaaa	cctcttaaca	actggcagat	180
aatagctaaa	tcttaacaga	caaagaagaa	atattttctt	tgggacagct	gctatctaga	240
agaaaaccaa	gggcccttaa	tatagtctaa	atataatgtg	tggcttatta	tagagaaatc	300
tttagcaacg	taagtttaac	cagtaagtgt	cacaactgat	caacagtact	taaaaggaaa	360
caaacaaaaa	tcacactagc	cacaaatttc	caccatatac	acatgaaatt	aatttttaatc	420
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gtagaaaaca	agcaaagatt	agtttataca	acagtgacta	tatacatcag	agggaaaaca	540
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aagaactcct	aaattacaaa	ttcatcacat	tacatgcattg	caatgggtcac	ttttggttta	660
cccataaaaag	gatacncagt	attttgctgn	aaataccagg	accacattta	caatatatgc	720
aaaaaattag	aatgcagngg	taagntcctt	anatttaagc	cctcatatgn	gncaacaggg	780
gaaaattcca	tttattttta	agaaaggaaa	aanggagacn	gggatataaa	tactcggaga	840

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870

<210> 379

<211> 837

<212> DNA

<213> Homo Sapiens

<400> 379

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aggagaagtt	caagcaggcc	ctttctggaa	ttctcattca	atttgagcag	atagtggctg	180
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<210> 380

<211> 793

<212> DNA

<213> Homo Sapiens

<400> 380

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<210> 381

<211> 807

<212> DNA

<213> Homo Sapiens

<400> 381

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gatgtttgac	aaggatgtag	taatgcttca	gacaggtgtc	tccatgatgg	atccaaatca	180
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gcctatggct	catagtgaat	tggtaaagtc	tttacctgaa	gatgagaaca	aggagactgg	480
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<210> 382

<211> 800

<212> DNA

<213> Homo Sapiens

<400> 382

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cagtcaatgc	caaccagtgt	ctgattggct	tctgtgcat	gtccaatttc	ctctgtgaca	180
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aaacagcctt	tggttttgcc	agctaaaaat	agcacctgac	attccccgtac	tctcagggaag	360
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acntttcaat	cagggaattc	antatctcac	tattttcttt	gaaaaaggca	aatggaggtt	720
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<210> 383

<211> 1203

<212> DNA

<213> Homo Sapiens

<400> 383

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<210> 384

<211> 2651

<212> DNA

<213> Homo Sapiens

<400> 384

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aaacagaaaa	ataatggcta	tcagaagtat	gttttgtttt	agtgtgagtt	accgttactg	2580
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 <211> 804
 <212> DNA
 <213> Homo Sapiens

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<210> 386
 <211> 782
 <212> DNA
 <213> Homo Sapiens

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<210> 387
 <211> 865
 <212> DNA
 <213> Homo Sapiens

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<210> 388

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 388

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<210> 389

<211> 737

<212> DNA

<213> Homo Sapiens

<400> 389

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<210> 390

<211> 775

<212> DNA

<213> Homo Sapiens

<400> 390

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<210> 391

<211> 776

<212> DNA

<213> Homo Sapiens

<400> 391

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<210> 392

<211> 909

<212> DNA

<213> Homo Sapiens

<400> 392

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909

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 <212> DNA
 <213> Homo Sapiens

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<400> 394
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<210> 395
 <211> 762
 <212> DNA
 <213> Homo Sapiens

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ctccagcttt	tttgngatca	gtgtgganga	ccggcccacg	cacgggcgcg	tcaangtgga	720
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<210> 396

<211> 822

<212> DNA

<213> Homo Sapiens

<400> 396

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<210> 397

<211> 812

<212> DNA

<213> Homo Sapiens

<400> 397

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cggngaccac	accgggccct	gtcaggcttt	aactcggant	ctttacgggg	taatcgnntg	780
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<210> 398

<211> 751

<212> DNA

<213> Homo Sapiens

<400> 398

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<210> 399

<211> 800

<212> DNA

<213> Homo Sapiens

<400> 399

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<211> 810

<212> DNA

<213> Homo Sapiens

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<210> 401

<211> 860

<212> DNA

<213> Homo Sapiens

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<211> 779

<212> DNA

<213> Homo Sapiens

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<211> 1443

<212> DNA

<213> Homo Sapiens

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<210> 404

<211> 819

<212> DNA

<213> Homo Sapiens

<400> 404

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<210> 405

<211> 761

<212> DNA

<213> Homo Sapiens

<400> 405

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cttctcaggt ctatctatat ttaattttgt cttctctata ttctccttcc attgccacag     300
agggcanaga caatggggct gaaaaactgt aataactgnc actaacagca aagtanctta     360
gtntttcaag aggtcaggag ttgcagtgtg gtgttanacc agtcanactc ctggctgaaa     420

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gtcaatgcct aatattggct cccagnggcc cctgagcact gtctcagggt ccacattcca	480
ggaatnttca natnttcctg gaatgacaag aattggaacc ctgctgncca tagacacttc	540
tccctgcctt ttggtgaaag gaaagacttt gggccccctt aataccttan tatcccatgt	600
gatcaagggc caaaagccaa aggggattct tatccttata gcctaagacc ctgaaattct	660
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<210> 406

<211> 758

<212> DNA

<213> Homo Sapiens

<400> 406

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attaggctca acaaaccaaa tgtgattctc agattaagca gaagcgttca ggctcagggc	180
agtagaagaa agcagactcg ccagtcctcg cagctccaac ctgtcctcgt atcacctctg	240
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cactggaatt gatgttctga tgtagaggt gagagaattc caagttttga ggggagtgg	360
ccaaagagta acaactaagt ctatagatgg cccgtaaaac acagaatgag caggacatga	420
atcattagaa agtagatggc tgctagaagt ggcactcggg tccgtgaatg acagagtga	480
cgcaggactc gcttccatcc aacgccactc cgggtccttc gacaactgtt gcttgtaaga	540
tctattaaca gtgctgtctc ctgagtgcc caggagccaa tgataggagt ccgggaaaga	600
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ttcagcagcc actctttggc cncggtcttt cttccagcag ctccctttaa atcattcctt	720
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<210> 407

<211> 778

<212> DNA

<213> Homo Sapiens

<400> 407

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actgaatctc aaaaagattt ggaaataacc aaagaaaatc tggctcaagc agttgaacac	180
cgcaaaaagg cacaagcaga attagctagc ttcaaagtc tgctagatga cactcaaagt	240
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gaatcagtta aaagccagat gaaacaaaag gatgaagatc ttgagcgaag actggaacag	360
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gacaaggaag ttcagcaact tcaggaaaac ttggacagta ctgtgaccca gcttgacgcc	540
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gaagataatt gcagtgtcta aaggacactt agacagatgt ccttcntatg gaagaattaa	720
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<210> 408

<211> 752

<212> DNA

<213> Homo Sapiens

<400> 408

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aaaccaaang	ngattnnaa	attaancaa	ancgttcagg	ctcagggcag	taaaaaaaag	180
caaaactcgcc	agnccntgca	gctccaaact	gncctcgtat	cncctntggt	tttgcaggcn	240
ntttccgnga	anagttggan	anaaaacctg	taaanggnaa	aactgttcca	ntggaatnga	300
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aactaagtnt	ntananggcc	cgtaaaacnc	anantganca	ggacntgaat	cnttaaaaaag	420
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ggggctttta	ccgtctgaat	ctggctcctg	gccncagaga	gagcnttttt	nagnaggccc	660
ncnttttggg	ccccgttntt	ttttccagca	ngcttccctt	taattcatte	ncttcccggg	720
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<210> 409

<211> 736

<212> DNA

<213> Homo Sapiens

<400> 409

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agatcaagtc	caatatcgat	gccctgctga	gccgcttggg	gcagatcgct	gcggagcaaa	180
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caccagcccc	ccaagagaac	acaacttctg	aggcaggcct	gccccagggg	gaagcacgga	360
cccagagacga	cggcgatgag	gaagggtctc	tgacacacag	cgaggaagag	ctggaacaca	420
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cacccccccag	cgggtaccag	aggaaagctg	cagcaggccg	cctcctcccc	caacgcacnc	600
cagccagtgc	catgtcctct	gcaggtggag	ttactggcct	actccttccc	atgaaccctt	660
ccttgctctg	acttgccagg	ccagagggta	gagcacangg	gtttccccat	acttaccttc	720
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<210> 410

<211> 766

<212> DNA

<213> Homo Sapiens

<400> 410

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ctaccctctg	gcctgggcag	tgcanacagg	gagggctcat	ggggaaggag	taggccagta	180
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cctggggcag	cgatgccctt	cacctgctgg	nggccattgc	tcctgtcagg	ctgcttactg	360
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cgggttaanc	agggcatcna	tatttggaact	tgaactgggn	caancttccg	ncttgaangg	720
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<210> 411

<211> 812

<212> DNA

<213> Homo Sapiens

<400> 411

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agatcaagtc	caatatcgat	gccctgctga	gccgcttgga	gcagatcgct	gctggagcaaa	180
aggccaatcc	agatggcaag	aagaaggggtg	atggaggtgg	cgccagcggc	ggcggcgggc	240
gtggtggtgg	cagcgggtggc	ggtggcagtg	gtggtggcgg	tggcgggtggc	aacagccggc	300
caccagcccc	ccaagagAAC	acaacttctg	aggcaggcct	gccccagggg	gaagcacgga	360
cccagagacg	cggcgatgag	gaagggctcc	tgacacacag	cgaggaagag	ctggaacaca	420
gccaggacac	agacgcggat	gatggggcct	tgcagttaagc	agcctgacag	gagcaatggc	480
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ccacccccca	gcgggtacca	gaggaaagct	ggcagcaggc	gcctcctccc	ccaacgcctc	600
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cctccccagg	acactcccag	gcttgggttt	tttctatagg	tttggcgggg	ggcncagggg	780
aggggaccct	gacaataaag	agattggatc	cc			812

<210> 412

<211> 857

<212> DNA

<213> Homo Sapiens

<400> 412

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gaagaagatg	aggagaagat	tcagaatgaa	gattatcctc	acgagctttc	agatggagat	180
ctggatctgg	atcttgttta	tgaggatgaa	gtaaatcagc	tcgatggcag	cagttcctct	240
gctagtcca	cagcaacaag	taatacagaa	gaaaatgata	ttgatgaaga	aactatgtct	300
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gcagctgctg	caggaccgcg	aggtagtagc	catggttatg	tgggttccag	tagtagaata	420
tcaagaagaa	cacatttatg	ctccgctgct	accagtagtt	tactagacat	tgatccatta	480
attttaatac	atttggttga	ccttaaggac	cggagcagta	tagaaaattt	gtggggctta	540
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gaccaaagga	agcaacaggc	aatgtggcga	agtgcctctc	gatttaaaga	tgctaaaaag	660
actcaaaact	caaattggcc	gaagttcgat	gtatgaaaac	tgatgtaaag	gaatacactt	720
tcagaaataa	aaagcacagt	gctgcttctg	gagacatgcn	gacaagnctt	tttttgctga	780
nccagcagnt	ntggctgatg	tggactgaaa	cttttggcag	aatgcaggat	ttggatggac	840
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<210> 413

<211> 790

<212> DNA

<213> Homo Sapiens

<400> 413

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cacagcnttc	agcaagacat	canacncgga	anagnganca	atattcacta	agtaaaatnc	120
agcanatgan	atgtctntca	catgtatatt	naattattca	tgctttttca	atagtctntt	180
agtcaacttt	cagngtaatt	tcacaaaata	tatagcagnt	caaacncaaa	tgagganncn	240
caanggcaaa	gttnggcaac	tgtttngggc	taattatgag	tntgaaagaa	anccttatat	300
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ngcnctacag	tcgtatagta	agaggcagaa	aaaaatgaan	gaatttttaa	taatcttaca	480
cgtgtntaca	gggccaggaa	cgtaatgaat	ccatgttaac	ttaatttcat	ttaaaattnc	540

attttagtaa	gtcncncaac	agaaagatcc	atgcggttga	acagtgtgcc	tgtncttgac	600
aagttagaga	agatccttct	ccaaaaggga	gattcagtct	agggnctact	cagttnttcc	660
catagnngct	acagggcana	atctttttca	aaagcaatct	tctggtcctt	aaatctacag	720
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<210> 414

<211> 1063

<212> DNA

<213> Homo Sapiens

<400> 414

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nggcnttgac	tctgnnnngc	gacntnttgc	tagtcttcag	gnctcctact	acaggctttg	120
taatganctn	nacttgnctt	gagacagcct	angggagacc	acggatgntc	tattannngn	180
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tnaatagaag	ctcatnntgt	cataaatggn	ccatgactta	taaatnaagt	ggactggata	300
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agaggncnac	cttgtntnan	ctnntgcngc	tgnaagancc	agaganannt	gccttgggag	420
attcatggcc	natgatagta	tatnatctct	tacaccanct	atgccttgct	gnatcncaaa	480
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cccatgaacg	acanttgctt	acgntanagc	ntgaacnctn	tgatgagctt	ctncagccca	600
gacctcatca	tttcgagaag	cacatgtccc	tgcgtttcaa	cctatggatg	aggaaaagnc	660
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gaacttaacc	ntcacaattn	ggntgngant	tctnggtaac	ggcntaatct	nccccaggaa	900
ttggccgctg	cttcnacggg	aattaanggg	aatctttccc	atcccnctta	nnaccagtta	960
ggngcccntt	tttcaatttt	cngactcccg	gagcttttaa	aaaccggggg	ccttaggttn	1020
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<210> 415

<211> 824

<212> DNA

<213> Homo Sapiens

<400> 415

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taaatatcac	aggaaatata	ntgcattttc	aagntgnana	gacnaatact	tnctcattca	180
cagngnttga	catanganag	cctattttca	tancnatctg	tataaagtca	tgctctnant	240
ancaggnat	ncagngctgn	gccancacaa	tgnttttnaga	angtgaagaa	ccggncaaac	300
cactnntggn	gctggggatc	tggnanaagcc	acctgnanaa	gcttcactct	gagcangact	360
cannaatgnc	ttgngccctt	taggtggcac	tggtctgtga	agtgggttaag	ctgctgctga	420
actcaattcg	tggaactgnag	aattaggaat	ggganccagg	cgggttnggat	gaccattgcc	480
cactcnanca	natnccaaag	nnctnagaan	gggaacnctc	caancctgct	tnatggngat	540
taancatnct	tcttcttttg	cttaacccat	ggattananc	acancagcna	gtacngactt	600
ggntttaccc	ncttcngttg	gaaataagga	ttcttgatng	actaaannnc	agctggtnaa	660
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aaaangngnt	tttaagtctc	ggtaatccta	ccggnaaatta	nttgggggct	ntgaattcan	780
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<210> 416

<211> 838

<212> DNA

<213> Homo Sapiens

<400> 416

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aaatacacaa	ttttactagc	aaatgcctct	actgtaatcg	ctattttacc	acagatactc	180
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<210> 417

<211> 880

<212> DNA

<213> Homo Sapiens

<400> 417

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cgataaaaata	aacccttggg	ttttcctcgg	gggattcatg	gagtcacccg	ccttaatggg	840
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<210> 418

<211> 763

<212> DNA

<213> Homo Sapiens

<400> 418

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cctcctctcg	aatgcagcag	ccacagatct	ctgtctacag	tggttcagac	cgacatgctg	180
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tagaaattct	tatggactgg	aatcttctct	aaggcttact	ttgttctcgg	gatgcagtgg	480
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gttggggctg	agtgtaaaga	aatgcaagct	gcaaactctg	cttacatgtg	gaaccaaagc	720
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<210> 419

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 419

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tggattcact	acttttttta	nagngtcggt	ttaccactac	tattggccta	ttacctgtat	180
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ttgaaatagt	agngtaacac	ttcacaaata	gagtaaaaaac	cttataatct	tccatttttc	300
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ctttgngtag	attcaaattt	ctgnecatct	ccctttgccc	aaagaacttc	ttttcatctt	540
tcttatagtt	caggtctgct	ggcaaccaat	tagctcagcc	tttggtttgc	taaaaaagtt	600
catatattat	cttgattttc	aaatggnatt	taagctctat	ataggaattc	ttaggtgact	660
ttaattcctt	catcattggg	aagangtcat	aaagggcttg	caaaggacta	gaaatctgct	720
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<210> 420

<211> 799

<212> DNA

<213> Homo Sapiens

<400> 420

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acttgatgat	atcctaccct	tcttacaaca	aattccatcc	aaggaaacctg	cggctctcat	180
gggaatttta	ggtattttaca	aatgtacttt	tactcataag	aagttgggaa	tcaccaaaaga	240
gcagctggcc	ggaaaagtgt	tgcttcatct	tattcccttg	agtattgaaa	acaatcttaa	300
tcttaatcag	ttcaattctt	tcatttccgt	cataaaaaga	atgcttaata	gattggagtc	360
tgaacataag	actaaactgg	agcaacttca	tataatgcaa	gaacagcaga	aatctttgga	420
tataggaaat	caaataaatg	tttctgagga	gatgaaagt	acaaatattg	ggaatcagca	480
aattgacaaa	gtttttaaca	acattggagc	agaccttctg	actggcagtg	agtcggaaaa	540
taaagaggac	gggttacaga	ataaacataa	aagagcatca	cttacacttg	aagaaaaaca	600
aaaattagca	aaagaacaag	agcaggcaca	gaagctgaaa	agccagcagc	ctcttaaacc	660
ccaagtgcac	acacctgttg	ctactgttaa	acagactaag	gacttgacag	acacactgat	720
ggataaatatg	tcatacttga	ccagccnttc	tggtagtacc	cctaaatctt	ctgcttcaag	780
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<210> 421

<211> 770

<212> DNA

<213> Homo Sapiens

<400> 421

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aggaaaacca	tttgttaaaa	cagtaggcgg	atcttttcaga	gactccaaat	cattgacaat	180

tcagaaggat	cttgctcgctg	catttgacaa	cggagaccag	aagggtgttct	tcgatctgtg	240
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ctatctccac	atccattttg	ccatctatct	tttgaagtac	tctgtgggga	gaccggacaa	360
agaggagctg	gatgaaaaga	tttcctactt	caaaacctac	ctggagacca	aaggggcagc	420
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ggtgcacccc	tcattttaag	aactcttcca	ggattcctgg	actccagagt	taaagttgaa	540
gttggaagaa	tttctagctt	taatatctaa	agccagcaac	acgccaagc	ttttaacaat	600
atataaggag	aatgggacan	agtaacaaag	aaatcttgca	gcagcttcac	cagcagctgg	660
ntgaagcttg	aaccgtaggt	caatgacata	cctcaaacgg	naccataaga	tccaggcccc	720
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<210> 422

<211> 733

<212> DNA

<213> Homo Sapiens

<400> 422

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ctgtggccgc	cgggggtgac	ggnccctttg	aggggctcat	ccccgctcca	ctgcacatta	180
gccagccctt	tccgccttgt	cttccccgng	ttggtcatga	tccccaggta	ctccgnggtc	240
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tcggcttcca	tgatgtcatg	gnccctctca	tcattcttcat	cttcatcatc	atcagattca	360
agaacaccat	ctggtagctc	ttcggaattt	agctgcttga	tgatgaattc	tatctggcgg	420
atcattttcag	cattgccttc	tttgatgaag	cagcgttaga	tgtcttccat	tcccattgct	480
cttgcttccct	cacgaatgga	tggancagaa	aggatgctgt	acagagctcc	attcacatac	540
ggctgtatct	catgggtttt	atggccaaga	agatccgaaa	ggactttgag	caccgaggcc	600
tgccaccttg	gcacacatgg	tcttccctgn	gctgcggagg	gcagagggtc	atggagcaaa	660
agccaccgag	tactccaacg	gggnagccag	acagggcagn	cagggctcct	tcanaacatc	720
aacccagccc	gaa					733

<210> 423

<211> 862

<212> DNA

<213> Homo Sapiens

<400> 423

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atcgagaaac	tgcacctgtt	tcccagcctg	aaaacaaacc	agaaagtaag	ccaggcccag	180
ttggaccaga	actccctcct	ggacacatcc	caattcaagt	gatccgcaaa	gaggtggatt	240
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ctgctccagt	tccttgtcct	cctcccagcc	ctggcccttc	tgctgtcccc	tcttccccca	360
agagtgtggc	tacagaagag	agggcagccc	ccagcactgc	ccctgcagaa	gctacacctc	420
caaaaaccagg	agaagccgag	gctcccccaa	aacatccagg	agtgtctgaaa	gtggaagcca	480
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acaaaaagta	cctgatgata	gaagagtatt	tgaccaaaga	gctgctggcc	ctggattcag	600
tggaccccga	gggacgaagc	cgatgtgcgt	caggccagga	gagacggtgt	caggaagggt	660
cagaccatct	tggaaaaact	tgaacagaaa	gccattgatg	tccangtcaa	gtccagggtct	720
atgaacttca	agccaagcaa	ccnttgaagc	agatcaagcc	cctggaggca	atcatggaaa	780
aggggtgccgt	ggcagcaaga	caagggcaag	aaaaatgctt	ggaaatggcn	gaagatcccc	840
acacnggaaa	ccagcaggcc	cg				862

<210> 424

<211> 859

<212> DNA

<213> Homo Sapiens

<400> 424

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gagatgaaga	aaatcatctc	attaaaaatgg	caacat	gataaatgtt	tcatatttat	180
gtgatgggta	attgactccc	catctacccc	tccagtccag	agctacaaaa	gacagtgcac	240
aaccacagct	aacaggtggt	gggggtgccc	aagtagacag	ggctgcagaa	caagcaacgg	300
ggttaaactt	ctcaaacaac	aagcaacttc	tttatttgta	cagagtaaga	atatagaaga	360
aaagcatcat	tttctttttt	agccctttta	ttagtggttt	gcctccaccc	aagttactgc	420
ataccaagca	gctaataaaa	accaactgac	ttaaagtctc	tgaaatgcat	gcaacttaaa	480
attccctaaa	gcacacatcg	gttccgagtc	tgatttttac	agggcagagg	ctacgggtgct	540
gctgggttac	caggggtgtc	tggcatgctg	ctgggggttg	aagtcgctgc	tgctgnggct	600
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tggccaaggt	ttttccaaga	agggcctgga	accttccctgg	acancggntt	tttctgggcc	840
tggacgcnc	attgggggtt					859

<210> 425

<211> 837

<212> DNA

<213> Homo Sapiens

<400> 425

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tgatactttg	aaaagggtcac	agctttttac	agcagaaagc	ctacaggcca	gcaaagaaaa	180
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aaaattaaag	acagagttac	agatggtaca	ggatgaagct	ggaagtcttc	ttgacaaatg	300
ccaaaagctt	cagacggcac	ttgccatagc	agagaacaat	gttcaggttc	ttcaaaaaca	360
gcttgatgat	gccaaaggagg	gagaaatggc	cctattaagc	aagcacaaag	aagtggaaag	420
tgagctagca	gctgccagag	aacgtttaca	acagcaagct	tcagatcttg	tcctcaaagc	480
tagtcatatt	ggaatgcttc	aagcaactca	aatgacctcag	gaagttacaa	ttaaagattt	540
agaatcagaa	aaatcgagag	tcaatgagag	attatctcaa	cttgaagagg	aaagagcttt	600
tttgcaagc	caaaacccaa	agtctggatg	aagagcagaa	gcnacagatt	ctaagaactg	660
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anctgcaagt	agaatggaag	aagaggggct	taattaacga	nggccattct	aagacttttg	780
gaagaattag	cttggaacnc	cttttggcaa	ttgaacttgt	cncaggtaat	gccattt	837

<210> 426

<211> 724

<212> DNA

<213> Homo Sapiens

<400> 426

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aaaaataaca	gttataatta	cacacataat	atagtacctt	atagaatgat	tccaataaat	120
atcacaggaa	atacagtgca	ttttcaagtt	ggagagacaa	atactttctc	attcacagtg	180
tttgacatag	gaaagcctat	ttacataaca	atctgtataa	agtcatgctc	ttagtaacag	240
tctatacaga	gctgtgccaa	cacaattctt	tcagaatgtg	aagtaccggg	caaaccactc	300
ctggcgctgg	ggatctggag	aagccactgg	agaagcttca	ctctgagcag	gactcaaaaa	360
tgtcttgggc	ccttttaggtg	gcactggctg	tgggaagtgg	ttgctgctgt	tgaactcaat	420
atcgtggact	ggagaattag	gaatgggac	caggcggtta	ggatgtccat	tgcccactcc	480

accagattcc agagcactta nattgggaac actcacaac	ctgtttgttg gtgatttacc	540
attcttcttc ttttgcttag ccaatggatt aataacacca	acagtaggac ttgagttaaa	600
cactttgggtg aaagttagtt tctcgaattg actaattcca	gctgataaaa cttattatcc	660
tcaattagtt tctttatgan ctgggcctct ttctgtaagc	atggctttta attctggaat	720
catc		724

<210> 427

<211> 981

<212> DNA

<213> Homo Sapiens

<400> 427

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tagatgatga tagntncaat gaanctgnga	ncatanatta angaaacana naacantncn	180
aaaggtccac aaatctgggtc ctatgaaaag	agtaaaatta ccaagactng gtgaaaganc	240
ccannaaaaan ncanagagag anagagagag	agagaganac anagagagag aganaaaagg	300
aaggcacacn taancnatat cagcaataaaa	anggggnact ttantacana ttctgcaanc	360
attannnnna taatganagg atattatgaa	cagttgtatg gcnatatgtt tgaaaactta	420
gatgccgata tgtttgaaaa cttaaatgaa	acggaaaaat tccttgaaga accacaantt	480
aaatttgaca caggtagaaa atntgaatgc	agttngncct tcagtatctg tggggaaatc	540
ggttncagaa ccaactcccc antaccnaaa	tttataattg ctcaagttcc tgatataaaa	600
tggcaaagta ttgcatata ncctatccct	acccttttac atactttaaa taacctntga	660
gttncttnat tatacctaac ataatgtaca	tttctgtggc aaatcgntnn taatattgga	720
ttttnaaaat tatnttantt ttggaatagg	nngtantatt tcctggggct tttttttcc	780
ccaaatattt tntaattccc caattnggtt	ggaatcttgg gaaccccatg gnggggancc	840
catangattt tgggaanggn ccaacttggg	gccttngtaa ctttttaaag aaatngggaa	900
ttctttgntn aanaattctt ncnccaaag	aaaaccctt tggcccaana agttntttna	960
aatggggaaa tttncccaaa c		981

<210> 428

<211> 655

<212> DNA

<213> Homo Sapiens

<400> 428

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ttttattcat ccaagaaata ttcattagag	aaattggcat gggatttttt ttctattgta	180
atgtccttgt caggtatcaa ggctttttca	gcctgataaa gcatattaag aaatgcttcc	240
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tgggtgaaatt cacaattgaa gacatctggg	cctagcgtgt tctttgtagg aagaatatta	360
agaaagaatt ccatttcttt aaaagttacg	agcacagtgt gccttccaga tctatggatc	420
ccacatgagt tccagattca accaattgtg	tattaaaaat atttgggaaa aaaagccaca	480
agaaataata caactataca aaataatata	atttttaaaa tacaatataa caacgattta	540
cacagaatgt nccattatgt taggnattat	aagtaactca gaggnatttt aaagnatgtg	600
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<210> 429

<211> 788

<212> DNA

<213> Homo Sapiens

<400> 429

gagcagcaga gatttttggct gtgagaatta	attaccagta acagttcaat atgggggaca	60
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aaagtaccaa	gaaatcttgc	agcagcttca	ccacagctgg	ttgaagctga	acgtagggtca	720
gngccttcc	taaacggggc	aattaagaat	ccaggccgac	taccacaatc	ttantggggg	780
tcccagca						788

<210> 430

<211> 655

<212> DNA

<213> Homo Sapiens

<400> 430

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ntggggccnc	cgggggngac	gggcctttgc	aggggctcat	ccccgntcca	ctggacatta	180
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anaacnccat	ntgggnanctt	ttcggaattt	aactgcttga	tgangaattc	tatntggngg	420
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ggntgnatnt	catggntttc	atggccaana	anaatcccaa	aggctttgag	cccaggntcg	600
gcccttggca	caaatgttnt	tcctggcttc	cgaaggccaa	ggttcattga	ccaaa	655

<210> 431

<211> 844

<212> DNA

<213> Homo Sapiens

<400> 431

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cctgtcacta	gagaatttga	tggttggtcga	cacattgcca	gtggtggcaa	tgggctagct	180
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cctttagaag	aatccaggga	ttgcttggca	ttttgtacag	aaccagtttt	tgccagttta	420
gccaatgttc	ttggtaactg	ggaaaatcta	ccttcccccta	tatctccaga	cattaaggat	480
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ttctgaacaa	gagcctaaat	ttccttgtaa	agaatgggac	ccaaattttac	cttcattgng	720
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ccagtggata	tgggattcnt	ttaggaactg	gtatggaatg	ccgggatttt	aataaaaggg	840
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<210> 432

<211> 807

<212> DNA

<213> Homo Sapiens

<400> 432

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aaactacttc	cttattcagt	gtaaaggagg	cttataagca	ttccaaaata	aaaacaaaca	180
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catactggat	ttttttccaa	tgacttattt	tcataatttag	tagttcaagg	tctataagct	660
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attaaaaacc	aattttcttaa	ataaaccgng	gctcctaaaa	tggtaccaag	gaaaaattct	780
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<210> 433

<211> 866

<212> DNA

<213> Homo Sapiens

<400> 433

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acacctcttt	ggcactagtt	cagaatgggtg	atgtgtcggc	cccctctgcc	atactcagaa	180
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aaaatgcccc	ggganggcct	ctggtggcca	tggcattagt	atatactaac	catcattctg	840
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<210> 434

<211> 764

<212> DNA

<213> Homo Sapiens

<400> 434

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gggggcatgt	taaaaaagca	gttggtcttt	tanaaggcat	cagagagccc	tntagtgacc	420

acgaagggga	gttaatgcag	agatgactcg	agacagagaa	gcagtcatga	gtgtttacaa	480
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gnattcttaa	atacttttaa	cctgagtaac	atattataaat	atgttatagg	aaacctcaca	600
gtcacaagtc	acactagaat	ccatctgtcc	agtatctggg	ctttcccccac	accagaatcc	660
atctgtccag	tatctgggct	ttcccgagtc	ttcctcttct	cataagttcc	caanggcagc	720
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<210> 435

<211> 834

<212> DNA

<213> Homo Sapiens

<400> 435

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tccaggagct	ctgtctaaac	atcattccaa	cctttgcaaa	tcttatagac	tacctatcca	180
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ttcgtgtaaa	ttcattagtg	tgcttaggaa	agattttgga	atacttggat	aagtggtttg	300
tacttgatga	tacctatccc	ttcttacaac	aaattccatc	caaggaacct	gcggctctca	360
tggaatattt	aggtatttac	aaatgtactt	ttactcataa	gaagttggga	atcaccaaag	420
agcagctggc	cggaaaagtg	ttgcctcctc	ttattcccct	gagtattgaa	aacaatctta	480
atcttaatac	gttcaattct	ttcatttccg	tcataaaaaga	aatgcttaat	agattggagt	540
ctgaacataa	gactaaactg	gagcaacttc	atataatgca	agaacagcag	aaatctttgg	600
atataggaaa	tcaaataaat	gtttctgagg	agatgaaaagt	tcaaataattg	ggaatcagca	660
aattggcaaa	gtttttaaca	acattggagc	agaccttntg	actggcagtg	agtccgaaaa	720
taaagangac	gggttacaga	ataaccttaa	aagagcatcc	ttaccacttg	gaggaaaaac	780
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<210> 436

<211> 812

<212> DNA

<213> Homo Sapiens

<400> 436

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tcagaagttt	gaatttgaaa	tgaaatatga	aggtagtagt	caggggaagtc	acatcagagt	180
gccttgtaaa	atatccaaac	aaatcagcac	atacctcttc	cttgatacag	gaggaaaaaa	240
gtgattctaa	atatatccaa	gtgaatgcag	aaaaatacat	tactatttga	ggcagacat	300
gctaaaatat	aattttacaat	gattagtttg	cacttaagat	ggttaataac	gcatttaaac	360
caatgaaatg	aagggttaagt	tgaattttgt	agtatttgc	cagtctctgt	actaaacaat	420
agttcatctg	aaaagtttgg	aaaaagcaaa	taacctgata	cttctcttta	tgcttatcat	480
tttctcactg	tcactcttaa	tgcaaacaaa	tcaatacagc	atcaagattt	tttacatatt	540
aaaatgaaga	ctaatacttc	atagactgng	taccatatag	tacttaatat	atgagcttgc	600
aatgaccatc	acctcaattt	tttaaaataac	accaagatcc	acaagccaaa	ataaacattt	660
gattaaaaag	ttatgggtatt	caagataact	cagtttcctt	tttctctttg	agattgggna	720
anggctgggt	ctttaaaaaa	ccctggaaaa	gggagttggg	taaagaggga	aaaaaatcct	780
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<210> 437

<211> 842

<212> DNA

<213> Homo Sapiens

<400> 437

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ctctagggtt	gttgaatgtt	gggtcacgaa	gatctcaacc	tggccaaaga	agagaacca	180
gaaagatcat	cacagtctct	gtaaaagaag	atgtacacct	gaaaaaggca	gaaaatgcct	240
ggaagccaag	ccaaaaacga	gacagccaag	ccgatgatcc	cgaaaacatt	aaaacccagg	300
agcttttttag	aaaagttcga	agtatcttaa	ataaattgac	accacagatg	ttcaatcaac	360
tgatgaagca	agtgtcagga	cttactgttg	acacagagga	gcggctgaaa	ggagttattg	420
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gtcgatgtct	agtaacgctg	aaagtaccca	tggcagacaa	gcctggtaac	acagtgaatt	540
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<210> 438

<211> 678

<212> DNA

<213> Homo Sapiens

<400> 438

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nngctctaaa	gatntcaaga	gnattaanag	nacttttntc	agggnagcac	tntttttttt	180
ttaaacantt	nttggngttc	tgtggncac	annatttcc	tntgtntcaa	ngtnatgtat	240
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gatntgangc	cnnaaaaaaa	aaaatctttt	ttacctgtgn	caccccaaac	tttttcaa	360
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ctggnatattg	cngaccttaa	aataaattaa	aagtnctcaa	ctnttttttt	ttttgntaaa	540
cnttttttta	agnatgann	cntggttaaa	aagaaaagnt	ttaaaccgaa	aatattttct	600
ataaataata	cctggatttt	ggnttttagg	ccccgcct	aaggnttgna	ggttactttt	660
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<210> 439

<211> 826

<212> DNA

<213> Homo Sapiens

<400> 439

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gaaaaattat	cagccacgga	gagcattgtg	gaaatagtaa	aacaggaagt	attgccattg	180
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gctcccatca	ccccttcac	agttccttcc	tttccctccaa	ctcctccaac	tcctccagct	300
tctcctctct	acactccagt	cattgttcc	gctgctgcc	ctactgttag	ttctccagct	360
gctgccatca	cagtcagag	agtcctagag	gaggacgaga	gcataagaac	ttgccttagt	420
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attttggatt	ctcaaaactt	aaattcaaga	aggagccctg	tcccagctca	aatagctata	540
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gtgaaaagct	gtggaagaaa	atggagaaga	actgagccag	accgtaatgg	ggcctgaaag	780
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<210> 440
 <211> 689
 <212> DNA
 <213> Homo Sapiens

<400> 440
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 ccacagcatt tccttctgtt tcaatgttat gtatgttttg attactattg tgatttttta 180
 aattttctga agcaagctga gaggcaggca gaaagatttg atgccaaaaa aaaaaaatc 240
 tttcttacct tgttcacccc aaactttctc aaatctggac taaatgctat accttaaaac 300
 aaacatgagg tgcattctga aggggaggga aatttatttc tctgcttttc tattatacaa 360
 gttgtttaca gaaactgcaa attaaaaaat tacactggca tttgcagtc ttaaaataaa 420
 ttaaaagttc tcaacttttt ttttttgcta aacatttttt taagtatgag tccttgttta 480
 aaaagaaaag attaaaacag aaaatatatt ctataaataa tacatgtatt ttggtttttag 540
 tgctcccgcc ctaaggtttg aagtttactt ttatccagta cctttttcct ccatgatcac 600
 ctttttttct ctttccctn ttccactcgg gcacacgtgg ggggtttctg cnanaattgg 660
 ccttgctgca ctgngaattg gcnaaaacc 689

<210> 441
 <211> 883
 <212> DNA
 <213> Homo Sapiens

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 cagccaagag agagaaaaaa actataagaa ttcgggatcc aaaccaggga ggtaaagaca 180
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 tggtttatgg gactgtggag agcgctcatc ttgctgccag caccctgtc actgcagcta 360
 gcgaccagaa gcaagctcaa atagctataa ctgtaccaa gacatggaag aaaccaaaag 420
 atcggaacctg aaccactgaa gagatgttag aggcagaatt ggagcttaaa gctgaagagg 480
 agctttccat tgacaaagta cttgaatctg aacaagataa aatgagccag gggtttcatc 540
 ctgaaagaga cccctctgac ctaaaaaaag tgaaagctgt ggaagaaaat ggagaagaag 600
 ctgagccagt acgtaatggt gcttgagagt gtttcttgag ggtgaaggaa tagatgctaa 660
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 gaagcctact ggtacttgaa ggtaagaaca gtatgaccag ggagtttctg gtggactttc 780
 cagttcatgc ctggctgnat tccaaaancc naagggcctg gcttctatta anggatgngg 840
 ttnttgacag gatcaaccaa ncccaaattg ccaatgggga act 883

<210> 442
 <211> 777
 <212> DNA
 <213> Homo Sapiens

<400> 442
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 tcgtgcacac gtggggggtt ctgcgagaat tggccttgct gcaactgtgat tggcgaagac 240
 gtgaaacttt ttaaaaaaat acttaaatg tttcttttgt ttcattttgt gtatttgaag 300
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 tagaaggcat cctcggagat cacctcctcg tcatatagac aatcaaaaaa catccgcagc 480

aaattggcag	gttgatcaag	ttttactatc	gatgcttgta	gtgcataaag	tgcttgagtc	540
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cagtgtccac	ttcttgaang	tagaagaagt	cggctattaa	tagctgggtt	acaaacagca	660
gtcattttaa	gctctaagga	atggtaggtg	aactcntctg	ggatttcggc	taagaataag	720
ccctttancc	aggccaaaga	acctggtean	tcaattcgct	tttggccctc	caataaa	777

<210> 443

<211> 875

<212> DNA

<213> Homo Sapiens

<400> 443

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agaggagagg	acaaggcttc	atgatgaact	ggaagaagcc	aaggacaaag	cccggcggag	180
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catcatgcat	gactgtgtgg	tgaagctgct	aaagaaccat	gatgaagaat	ccctggagtg	300
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agcagatcaa	gggcctaaaa	ctatcgaaca	gattcacaaa	gaggctaaaa	tagaagaaca	540
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gagagtggac	gaaggtgggt	ggaacactgt	acaaggggcc	caagaacagt	cgggtactgg	660
acctctcaaa	antcctaaaa	atcactaagc	ctacaattga	tgaaaaaant	cactggacct	720
aaagccagct	aggcagctgg	ggaaaaaggca	gcagtgggtg	accaangcaa	gtgaaactga	780
gcentacggc	aagtgttnc	agttaaacag	atctntgncc	tgaaccttca	gaaccttang	840
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<210> 444

<211> 756

<212> DNA

<213> Homo Sapiens

<400> 444

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taaagttgct	ctaaagattt	caagagtatt	aagagtactt	ttctcagggg	agcacttttt	180
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gccaacacatt	tttttaagta	tgagnccttg	nttaaaaaga	aaagattnaa	nccgaaaata	600
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acttttatac	nagnnccctt	tttccctcca	tgaanacccc	tttttttcnc	ctttcccttt	720
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<210> 445

<211> 783

<212> DNA

<213> Homo Sapiens

<400> 445

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gaaacctcta	ttaaccagcc	aaaagtcgta	gcacttagta	ataacaaaaa	agatgataca	660
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tgggtcttctc	catctcggat	gtctgattca	gttctcttaa	tactgatagt	agtcaagaca	780
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<210> 446

<211> 866

<212> DNA

<213> Homo Sapiens

<400> 446

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tttacaaga	gttgtaaag	ggtttcaatc	aaaattatta	aaactataca	gtacaataac	180
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ataaccaaat	attgctctaa	tgaaaggttc	cagactagcc	tcaactaaac	agttattggg	480
cttctatggc	acttttttct	ggtccaaata	accatgcatt	aatccttacc	attacatggt	540
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aaaattaata	aacctctatc	atcaaataat	tgttacagta	actaggaaca	aagaaaggca	660
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<210> 447

<211> 789

<212> DNA

<213> Homo Sapiens

<400> 447

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aaaaaatgg

789

<210> 448

<211> 820

<212> DNA

<213> Homo Sapiens

<400> 448

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cctgcctcag	cctccctagt	agctgggatt	acagggtgtc	accaccatgc	ccaattaatt	180
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cttcaactgc	tcttctttga	tttttggtct	cttctcttgg	gcttttccct	ggggtctcag	660
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gagggggngc	ctggggatta	ggactctttt	gcctgggana	cttcttttct	tgnggggnang	780
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<210> 449

<211> 936

<212> DNA

<213> Homo Sapiens

<400> 449

aaaagaagga	aacagttact	caactccaaa	atatcattga	ggctaattct	cagcattacc	60
aaaaaaatat	taatagtttg	caggaagagc	ttttacagtt	gaaagctata	caccaagaag	120
agggtgaaaga	gttgatgtgc	cagattgaag	catcagctaa	ggaacatgaa	gcagagataa	180
ataagttgaa	cgagctaaaa	gagaacttag	taaaacaatg	tgaggcaagt	gaaaagaaca	240
tccagaagaa	atatgaatgt	gagtttagaaa	atttaaggaa	agccacctca	aatgcaaac	300
aagacaatca	gatatgttct	attctcttgc	aagaaaatac	atttgtagaa	caagtagtaa	360
atgaaaaagt	caaacactta	gaagatacct	taaaagaact	tgaatctcaa	cacagtatct	420
taaaagatga	ggtaacttat	atgaataatc	ttaagttaaa	acttgaaatg	gatgctcaac	480
atataaagga	tgagtttttt	catgaacggg	aagacttaga	gtttaaaatt	aatgaattat	540
tactagctaa	agaagaacag	ggctgtgtaa	ttgaaaaatt	aaaatctgag	ctagcagggt	600
taaataaaca	gttttgctat	actgtagaac	agcataacag	agaagtacag	agtcttaagg	660
aacaccatca	aaaagaaata	tcagaactaa	atgagacatt	tttgtcagat	tcagaaaaag	720
gaaaaattaa	cattaatggg	tgaaattcaa	ggtcttaang	gacagtgtga	aaacctaccg	780
ccaggaaaag	caagaagcca	ttttaaantt	ntgagagntt	accagagga	ttttggaaat	840
ttcccaancn	gaactggggg	gaatctgctg	ggaaaaatag	gtcaggaggt	cgaatcatgg	900
aaccaccagc	aggcctttga	ngtcatgacc	tgagca			936

<210> 450

<211> 806

<212> DNA

<213> Homo Sapiens

<400> 450

aactcaaaac	agtgttaagt	tcctatgctg	ttagtactgt	atcttgtcca	cacctcaaac	60
aacagtgaga	tctctgagca	catgggtctg	acctcaacca	cttttctatc	accagggtct	120
agaatagttg	ggcattttaa	taaaatttgc	taaatgaatg	aaaaatccaa	aataaatcat	180

gaagccattt	ataaatcaca	ccaatcttgc	ttgggttaaa	caatagaaag	taacactttt	240
gaaagagaag	gcaaacaggt	gttagagggg	caagaatgtg	agctcgagga	aaagacagct	300
acgaactgtg	ttttaacaa	ctcattattt	ggctactata	tttccaatc	tattctaaca	360
ctaacaagaa	tctgtcta	taattgtgac	aacatctgca	aaaccatagt	tacctatttt	420
ttcttccaac	tcttttactg	aagacagagg	atcatttttt	acagaagggtg	attttgctaa	480
ggaatccttt	aatagtatca	actctgctct	cctatctcgt	aattcttttt	gntctagtag	540
tggcttttagg	ttttcatgtt	cctttataaa	acattttttct	ttttcattat	ggatttcact	600
tttgctacat	gtttgagata	cttctttcaa	cttgaattaa	aagaatctga	ttttcaagcc	660
ttggtttttc	attagcattc	ttcattttcta	gaagatccag	actgcanggn	ctctttttct	720
ggactggaat	tcttctaact	cttttctctt	aagaagaacc	tttttcttgg	ntcataggcc	780
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<210> 451

<211> 909

<212> DNA

<213> Homo Sapiens

<400> 451

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tcatthttata	cacactagtc	agtggctcac	ttccctttga	tgggcaaaac	ctaaaggaac	120
tgagagagag	agtatttaaga	gggaaatata	gaattccctt	ctacatgtct	acagactgtg	180
aaaaccttct	caaacgtttc	ctgggtgctaa	atccaattaa	acgcggcact	ctagagcaaa	240
tcatgaagga	caggtggatc	aatgcagggc	atgaagaaga	tgaactcaaa	ccatttggtg	300
aaccagagct	agacatctca	gacaaaaaaa	gaatagatat	tatgggtggga	atgggatatt	360
cacaagaaga	aattcaagaa	tctcttagta	agatgaaata	cgatgaaatc	acagctacat	420
atttgttatt	ggggagaaaa	tcttcagagc	tggatgctag	tgattccagt	tctagcagca	480
atctttcact	tgctaagggt	aggcccgagc	agtgatctca	acaacagtac	tggccagtct	540
cctcaccaca	aagtgcagag	aagtgtttct	tcaagccaaa	agcaaagacg	ctacagtgc	600
catgctggac	cagctattcc	ttctgttggtg	gcgtatcccg	aaaaggagtc	agaccagcac	660
tgcagatagg	tgaccctcaa	agaagatggg	aaatttccct	ccnggaaatc	aaagtggcag	720
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tagtancnca	gcattctggtg	ggaatgacnc	gaccgaaatt	ncttaagggtt	tgcagtggag	900
agaacttcc						909

<210> 452

<211> 672

<212> DNA

<213> Homo Sapiens

<400> 452

actgaaaaaa	agtgaanttt	naattatntt	gtnaatnnac	tnaaaaaacc	ncacncaagc	60
aatgttcaca	antntaaatt	naaacctttt	gcactaaaaa	ancacaaaaa	ancaaacaca	120
aaaccacagg	cntgaactgn	aaacctgtct	taactatgaa	ctggnettaa	ggttaattct	180
tannngccat	tcantatttc	nntccttggn	aactgtaatg	ttntagcacc	ggatgatctc	240
ccgnanaggt	nctagaannng	acngnctgcc	agnngangga	gatncttccn	tatacaccac	300
ttnanacnca	taccgtcnan	tttcanaccn	accagacggg	nangcacatg	gngatggggc	360
cncacnccna	ctntnanggn	aacggaagta	gggcaggngg	cgcattnggtt	gcacatcttt	420
aatgtattgc	attcgnaaaa	aaaaggccag	ntttcnatcc	caggcgtgct	ctngacctna	480
gactttaatn	ncatgattta	naanatncag	nacgntattg	cctaaatntt	attctataca	540
tttccatcag	tggttnagga	aaacacttta	aatgcaactn	antccacat	cananncact	600
gnggttacag	nttttagctca	ttgggcaatt	tttngaagca	atthtttnng	aaangctntt	660
ggaatgnccc	cc					672

<210> 453

<211> 834
 <212> DNA
 <213> Homo Sapiens

<400> 453
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 ggaagaagaa gcttcgttgt gagagggagg agcttccac catctacaag tgccttacc 120
 agggctgcac ggccgtgtac cgaggcgtg acggcatgaa gaagcacatc aaggagcacc 180
 acgaggaggt ccgggagcgg ccctgcccc accctggctg caacaagggt ttcattgatc 240
 accgctacct gcagcgccac gtgaagctca tccacacaga ggtgcggaac tatatctgtg 300
 acgaatgtgg acaaaccttc aagcagcggg agcaccttct cgtccaccaa atgcgacatt 360
 cgaggagccaa gcctttgcag tgtgaggtct gtgggttcca gtgcaggcag cgggcatccc 420
 tcaagtacca catgaccaa cacaaggctg agactgagct ggactttgcc tgtgaccagt 480
 gtggccggcg gtttgagaag gccacaacc tcaatgtaca catgtccatg gtgcaccgcg 540
 tgacacagac ccaggacaag gccctgccct ggaggcggaa ccaccacctg ggccaccgag 600
 cccctctgtg accacagacg gccaggcggg gaagcccga cccacctgag gacggcagtg 660
 aggatgagca cctctagcag cctggacttc gcagtggctg tgtcaagcct cacccttcgt 720
 gtgcaccgcg atgggagggg cggagggttg cttgccgncc ttggtgctgg angcgggctt 780
 ggtgtccggc tcaagtagcc ttctttgntc ttgggaccag tgggttattt tccc 834

<210> 454
 <211> 703
 <212> DNA
 <213> Homo Sapiens

<400> 454
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 tacaaatctc ctgcactgct ttagtgggga aaggaatcaa ttatttatga actgtccggc 120
 cccaagtac tcagcgtttg cgggaaaata aaccactggg ccagagcag aggaaggcta 180
 cttgagccgg acaccaagcc cgctccagc accaagggcg ggcagcacc tccgaccctc 240
 ccatgcgggt gcacacgaag ggtgaggctg acacagccac tgcggagtcc aggtgcttan 300
 aggtgctcat cctcactgcc gtctcaggt ggggttcggc ttcaccgctt ggccgtctgt 360
 gggtcacagag gggctcgggt gccaggtgg tgggttcggc tccaggggca gggccttgtc 420
 ctgggtctgt gtcagcgggt gcaccatgga catgtgtaca ttgaggttgt gggccttctc 480
 aaaccgccgg ccacactggg cacaggcaaa gtccagctca gtctcagcct tnggtttggt 540
 catgtgttac ttgagggatg cccgtgcct gcaactggaac ccacagacct cacactgcaa 600
 aggtttggct nccgaatgtc gcatattggg gacgaaaaag gtgcttccgc tgcttgaaag 660
 gnttgccca attnggtaca agatatagtt cccaccttt ggg 703

<210> 455
 <211> 825
 <212> DNA
 <213> Homo Sapiens

<400> 455
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 ttgacagtga agacaagaat ggtggtgagg acaccgaca tgaagaagga gaagaagaga 120
 atccttttgg gataaaaagaa aaaccagaag aagcaggtca tgaagctgag gaaagaggag 180
 agaccgagac cgaccagaac gaaagtcaga gtccacagga gcctgaggaa ggccccagtg 240
 aagatgacaa ggcagaaggg gaagaggaaa tggacacagg agctgatgac caagatggag 300
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 acaaggaagc cgatgaagaa ggtggagaga atggccctgc tgaccaaggt ttccagcccc 420
 aggaggaaga agaacgggag gactctgata cagaggagca ggtgccagag gctttggaga 480
 ggaaggagca tgctctctgt gggcagactg gtgtggagaa catgcagaac acacaggcca 540
 tggagctggc tggggccgca cctgagaagg agcaggggaa agaggaacac ggaagtggag 600

ctgcagatgc	aaaccaggca	gaaggccatg	aatcgaattt	cattgcccag	ttggccttcc	660
agaacacacc	aggaaaaaca	cacagagttt	taagaggaaa	cctgggcagg	cttgacaatt	720
gaacgttnca	tgggtgatca	caattgaacg	tgtgcacaag	aagctganga	cttgtggaat	780
ccggacaggc	attgccaaacc	agggggccagc	ttaacaagcc	ccagg		825

<210> 456
 <211> 740
 <212> DNA
 <213> Homo Sapiens

<400> 456						
acatcaacaa	cagtgggtata	tgttttaata	gttttccagaa	tataagctgc	atagcttttt	60
agaataaaaa	atgatataac	ttcagggtaca	tgcttttggga	cacttggtta	aacaaggaat	120
ctgtgtcttt	gatgaccacc	tcaaaagggg	cgcagacttc	acagtgtaac	ttggaaacag	180
acaaggagat	agatgattac	atcatgacat	actgcctaca	aaagaacatt	ctgacagaac	240
attaagtaga	acagagcaca	cagtttcaag	tattcagcac	tgctttctgg	ccaagtaaaa	300
actgcctaaa	gatcagtttc	tttcgactgg	aaaaaataga	tggagctgct	gagttctgga	360
cacagcgttt	ctttcccaga	atgagactgg	ctcagtcagg	cttgaaagca	gtgtgaggaa	420
tcactcttcc	ccttgactgt	taagaaaaaa	aaaaatgaac	taaacaaata	aattactaca	480
acaacaggga	ccatggcact	gaatgaaata	aaggggcaat	caccttccca	tcattgcata	540
gtctcccga	gcagcaagtg	tgaaagagga	tactgaaaag	ccacttcatt	tttacacagc	600
ccaagggatc	gtttttatng	atgacctggg	cacctataat	gnccagttgc	tttatgagaa	660
ccacacacac	accacattct	tcctaccctn	taagagaagg	taggttcctt	tcacaataag	720
gaaaaccccc	ccttatactt					740

<210> 457
 <211> 726
 <212> DNA
 <213> Homo Sapiens

<400> 457						
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tcactagtta	cagtctcgcc	gaggtctcgg	ctgggggtgg	gcagttagtt	agtcacaggc	120
cagaactcct	gtgggtcttc	tttaaaatgc	taacacccag	gttaaaagac	ttggggcaag	180
ggtggtgctg	gagctggcag	ggccccccacc	ccaagtctgg	gggaggtgcc	tgctcctcta	240
ggagggcaca	gggcccaggc	cacggcgccc	aggccttacg	gggcggcggc	tgctgcacag	300
tgccacatct	tcagggccca	cagcgccggg	tgagggcctg	cccagaagca	ccagagccac	360
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ttccaatgac	ttcatcctgg	ctggccttca	caagcgacg	cttctcggn	ttcagggccc	660
cggacttcgg	caaggggaca	nggcacgctt	cgggtgcccg	tggcttcggg	actttggacg	720
ccgcaa						726

<210> 458
 <211> 870
 <212> DNA
 <213> Homo Sapiens

<400> 458						
cgcggcctct	ccgcggggtg	taccacctgt	cgcggcgcga	gacctctggt	gaaagaaaag	60
atgttgctcc	ggttaagagt	agtttccacc	acttgacttt	tggcatgtcg	acatttgcac	120
ataaaagaaa	aaggcaagcc	acttatgctg	aacccaagaa	caaacaaggg	aatggcattt	180
actttacaag	aacgacaaat	gcttggtctt	caaggacttc	tacctcccaa	aatagagaca	240

caagatattc	aagccttacg	atttcataga	aacttgaaga	aaatgactag	ccctttggaa	300
aaatatatct	acataatggg	aatacaagaa	agaaatgaga	aattgtttta	tagaatactg	360
caagatgaca	ttgagagttt	aatgccaatt	gtatatacac	cgacgggttg	tcttgccctg	420
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gtgtattgat	gtgggaactg	ataatatcgc	actcttaaaa	ganccatttt	acatgggctt	720
gaccagaaac	gagatcgcac	ccacagttga	tganctgatg	gatgagttta	tgaaagcttt	780
actgacagat	atggccggaa	cacctttatt	cagttcgaag	acnttggaag	tcataangcc	840
ttcaggtctt	tgagaaagtc	cggggaaaaa				870

<210> 459

<211> 761

<212> DNA

<213> Homo Sapiens

<400> 459

aaatgtaaga	tatttattaa	ataaaaaggt	tacactatga	tttttataca	ctggtgaaaa	60
caatgacttt	tatttactta	aagccagcag	tagttcccat	tactctcata	atggttatagt	120
taaggcttga	tttagttcca	gaaaataaat	agggtaaatt	tttaatat	ccctagctct	180
gtctgctata	gggaatttca	gagtatgaag	gtaagatgaa	gcagatatat	aagaacattt	240
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gtacttctat	ccataaaaag	aaatttctat	tttagtagct	ctgtaagaac	taggccagag	360
aagagtatta	cccataatag	taaatagcaa	atactttggc	aagtctgaat	tagagtacaa	420
gtgaagacat	tcacaaacac	actttttaca	tctcctggat	gtggtacggg	ctgtatgtta	480
gaattaaagc	atcacaaacta	tctgattgta	gggtgctggg	gggcaatgca	atcaatcaac	540
acgtctaccc	caacagatgt	ggagacccat	ggaaaaaata	catcaaccaa	agtggtcagg	600
gagaacaaaa	ccccagaaaa	cacccttaaa	actgaagaca	ttatctcttc	ttggctgaaa	660
aaaggggttc	cctggagcac	angaaaggtt	ttatcaaggg	aggcttctat	tcngtaatca	720
caggaaggct	tgatgcanat	tcttggecat	tcatacccca	t		761

<210> 460

<211> 876

<212> DNA

<213> Homo Sapiens

<400> 460

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cactcagccc	tccagtgtctg	ggtctgcatg	gtgtgacatt	cggctaccag	ggacagaaac	120
cactctttta	gaacttggat	tttggcatcg	acatggattc	aaggatttgc	attgtggggcc	180
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atggggaaat	gagaaagaac	caccggctga	aaattggctt	cttcaaccag	cagtatgcag	300
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accaggatgc	cgcgaagtgc	ctgggcccgt	tgggcctgga	gagtcacgcc	cacaccatcc	420
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gggaacctga	tgctctcatc	ttggacgagc	caaccaataa	cctggacata	gagtctattg	540
atgctctagg	ggaggccatc	aatgaatata	aggggtgctgt	gacgttgtc	agccatgatg	600
cccgaactcat	cacagaaacc	aattgccagc	ttgtgggttg	tggaggaaca	gagtggtagc	660
ccaatcgatg	gtgactttga	agactacaag	ccgggagggtg	ttggaagccc	tgggtgaagt	720
catgggcagc	cnggccccga	naagtgaagc	tttnccttcc	agaagtntcc	gagagaacat	780
aattgggggg	gcctaaaann	cctctggggg	cttcccttct	tttgaanaat	gctntggnet	840
gcaantgact	tggcaaccat	ttaggccctt	ttaaagg			876

<210> 461

<211> 689

<212> DNA

<213> Homo Sapiens

<400> 461

gcaaacaaga	tccatttagt	ggggaagagg	ggactattaa	aagctgctag	aaaactgaat	60
aaagcaaadc	aagactgaga	acagttccaa	ctcccatcaa	tctccaaaca	gtgacaggtc	120
ggcagcaact	cctttccttt	atctcttccc	cttgtaaagg	gaaattcaag	ttcagcagca	180
ttcctttcct	gccccaaagt	ctcaaccaga	caagaggctg	caggcaccaa	atcttgggct	240
ggataatggc	aaaggcctca	gaagctcacc	tccagctctg	agcttcaaca	gctgtttgta	300
ccagtgaagc	agcattaaat	ccaccagaaa	agaacagcac	cacccaaaga	ctggggggca	360
gctgggcctg	aagctgtagg	gtaaatcaga	ggcaggcttc	tgagtgatga	gagtcctgag	420
acaataggcc	acataaactt	ggctggatgg	aacctcacia	taagggtggc	acctcttggt	480
tgttttaggg	gatgcccaag	ataaggccag	ctcagttata	tgaagagaag	cagaacaaac	540
aaagtctttc	agagaaatgg	atgcaatcag	aagtgggatc	cccggncaca	tcaaggctac	600
actccacctt	catgtgcttg	aaatggttgc	caggtcagct	gcaggcccan	aggcagtcct	660
canaaggaag	gggagaccac	agaggactt				689

<210> 462

<211> 840

<212> DNA

<213> Homo Sapiens

<400> 462

aggagccttt	ggagttccat	gccaagcggc	cttggcgccc	cgaggaggca	gtagaagatc	60
cggacgagga	ggatgaggat	aatactagtg	aagccgagaa	tgggttctcc	ctggaggaag	120
tggtacggct	cggaggcacc	aagcaagatt	accttatgct	ggctactttg	gatgagaatg	180
aggaagtgat	agatggaggc	aaaaaaggag	caatcgatga	ccttcagcaa	ggtgaattgg	240
aagcatttat	tcaaaatctt	aatttggcga	agtatacaaa	agcttcctta	attgaagaag	300
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cagaaccaca	ttctgatgag	aatggcagta	ccacaccgaa	agtaaagaaa	gataaacaga	480
acatctttga	atcttttgag	agacagactt	tgttacttag	gcctggaggc	aaatgggatg	540
atctggagta	cagcaatgaa	tattctttga	aaccccagcc	tcaggatggt	gnatctaagt	600
acaaaaccct	tgctcagaag	ctgtatcagc	atgaaatcaa	cttattcaaa	agtaagacga	660
atagtcaaaa	gggagcctct	tctacctgga	tgaaggcaca	ttgtgtcatc	ggggaccact	720
aggtgacagg	atggcagcca	ttgattcttc	ttattcagga	tgatgcccg	tcacaccact	780
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<210> 463

<211> 784

<212> DNA

<213> Homo Sapiens

<400> 463

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tttgcatctc	tggtgtgtag	ccagtcacat	cgttcagcct	cccatctaag	ctgtttgaga	180
cttgcatcat	ctttgttagc	catggcattc	atgccaatgt	tatcaaactt	ggatcccata	240
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<210> 464

<211> 850

<212> DNA

<213> Homo Sapiens

<400> 464

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ccacagaagc	cgcaggctcg	ggtctgcagc	ccctgaagct	ggactaccgc	gccctggccg	180
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<210> 465

<211> 759

<212> DNA

<213> Homo Sapiens

<400> 465

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cagaactcct	gtgggggtctc	tttaaaatgc	taacacccag	gttaaaagac	ttggggcaag	180
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ccgcgtgccc	cggcctttct	gggacctgct	gaggaccatc	tgggctcngg	aaagcgtcct	600
tgttccaatg	acttcatcct	ggctgccctt	cacagngcac	gcttntcggc	ttcagggccc	660
ggagcttttg	canggggaca	aggcaacgct	tcgggtgccc	ggtgggttcc	ggacttttga	720
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<210> 466

<211> 1240

<212> DNA

<213> Homo Sapiens

<400> 466

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ggattacttt	ccatcctgga	actactaaat	ctaattgctgg	gatgaagcat	ggaaccatgg	180
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acctccttgg	gaaagttatt	gaaaccacag	agcaagatca	ggagcccagc	gaggccaccg	300
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tggatgactc	ttgggaaaaa	gcaggaaaag	gattgaagga	gttggnctgg	aancacgcct	1200
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<210> 467

<211> 885

<212> DNA

<213> Homo Sapiens

<400> 467

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tccatcctgg	aactactaaa	tctaattgctg	ggatgaagca	tggaaccatg	gacactgaat	180
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tttgaccta	gcttgcccaa	agaaggacat	gataaagttc	tcaagtatct	tacttaagcn	780
caaaaanggc	agcactactt	tnttgaccac	ccccaacggg	ggacggtctt	gaatgccatt	840
catttaagcc	atgatgagcc	ataagcctgg	catggtttgc	tgtctg		885

<210> 468

<211> 748

<212> DNA

<213> Homo Sapiens

<400> 468

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atactatctg	taagtgaacc	aaactaaaat	tcatttatga	accaagaaag	gaagccaagt	360
tgaaaaggtc	tcgagttaaa	tcgagaatga	ttcaggcggg	ccggctctct	gagcaccttt	420

ggatgcactt	cagcttctgt	cttgtggaaa	cgcggtggaat	tttagggcctt	tggtttacac	480
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tgagtttgcg	gaaggatgtc	tccacgccgc	ttgtgcgaga	cactgtcact	ggcttcggag	660
ctcgnctatt	tgctgccttg	tggaggcagg	cgaaanaagc	agcgagtggg	ccctgaaaag	720
gngggcnttc	actgggctgg	aaggcttg				748

<210> 469

<211> 770

<212> DNA

<213> Homo Sapiens

<400> 469

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atgctgtgg	cagaaggaat	gccagggtgg	gaccgtgata	cctttaatga	caataggaac	180
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ggatgcactt	cagcttctgt	cttgtggaca	acgcagtggg	atTTtagggc	tttggTTtac	480
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agctgagttt	gcgggaaagg	atgtnttcca	cgccgcttnt	cgcanacact	ggcactgnct	660
tgggagctcn	gctattttgc	ttgcccttgt	ggangcaggc	caaaanaagc	caacgaatgg	720
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<210> 470

<211> 892

<212> DNA

<213> Homo Sapiens

<400> 470

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ctgtggagca	cgacaacatc	tcattggcag	gctgcctgct	cctggagggt	gatgcccattg	660
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ccaggctggc	agctcttctt	aaagcagcag	gagcagatcc	cctgggtggg	gactttgagc	780
ccttctatga	cctggatgac	tcttgggaaa	atgcaggaaa	aggattgaag	gagttgggct	840
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<210> 471

<211> 759

<212> DNA

<213> Homo Sapiens

<400> 471

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atgctgtggt	cagaaggaat	gccaggtggc	gaccgtgata	cctttaatga	caataggaac	180
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acggtgtggg	aaattgtcag	caggctaaat	tttgcttct	agaggtcctt	cctgcccata	540
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gctgagtttg	cggaaggatg	tctccacgcc	gctgtccgca	gacactgtca	ctgnctcgga	660
gctcgtctat	ttgctgcctt	gtggaggcag	gcgananagg	caacgagtgg	gccctgaaaa	720
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<210> 472

<211> 852

<212> DNA

<213> Homo Sapiens

<400> 472

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ggattacttt	ccatcctgga	actactaaat	ctaattgctg	gatgaagcat	ggaacctatg	180
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tggttaactc	tgttttgcac	cctaacttgc	caaagaaggg	cattgataaa	ggtcttcaag	780
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<210> 473

<211> 804

<212> DNA

<213> Homo Sapiens

<400> 473

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804

<210> 474

<211> 819

<212> DNA

<213> Homo Sapiens

<400> 474

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gagccattg	aaataccatc	ggaagacgat	gggacggtgc	tgtctccac	ggttacagcc	180
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<210> 475

<211> 721

<212> DNA

<213> Homo Sapiens

<400> 475

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aagcacacca	caagctcagt	ccatgttctc	agcccatcag	cttcagttca	cattgccaca	240
cttacatata	agtaacagaa	gagaacacac	accatacagc	attcacagca	gttgacaaaag	300
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gaacaaaaac	tcacttaaaa	gtcttccaac	agatgtggat	gtcctttgaa	tgcaaaaaac	420
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acaagggtttc	aaaagttcag	acagccttct	ggttccatat	cacaggcctt	gcgttcatag	660
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<210> 476

<211> 442

<212> DNA

<213> Homo Sapiens

<400> 476

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gggtaggggn	agtccangta	tcatttnant	taccacattc	atctaagggg	ggttatctaa	360

nacaaaaanc tcanttaaan gtnttccanc anangnggan gnccttngaa ngcaaaaaanc 420
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<210> 477

<211> 878

<212> DNA

<213> Homo Sapiens

<400> 477

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gatgagccca	ttgaaatacc	atcggaagac	gatgggacgg	tgctgtctct	cacggttaca	180
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gcagtgaag	tgaaaagagc	agtccagaaa	acatccgatt	taatagtgtt	gggtctccca	420
tggaaaacaa	ccgaacagga	cctgaaagag	tatttttagta	cctttggaga	agttcttatg	480
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acggaatatg	aaacacaagt	gaaagtaatg	tcacagcgac	atatgataga	tggacgatgg	600
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gtgtttgtgg	ggcgctgtca	gaggacatga	ctgaggatga	agctgcggga	gttcttcttt	720
agtaccgggg	atgtgatgga	tgtcttttatt	ccccaaagcc	nttcaggggc	ttttggcttt	780
ggtacatttg	ccagatgac	agaatgccca	gtctcttttg	tggaaaagga	ctttgatcat	840
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<210> 478

<211> 768

<212> DNA

<213> Homo Sapiens

<400> 478

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gattgaccaa	atagattttt	aaaaacaaat	ccttgccaaa	tagtttaagt	acttttaaac	120
ttcaaaatct	tcttagggta	aaataaatac	ccgtatctat	gcagtaccat	aaacatgtta	180
ataaaaggcc	actcaacatt	gaaagccttc	tatgaccagt	aactgaaatt	tacacaagtg	240
taaagaaggg	attaaaccat	gccgttgaca	agttaactta	cccctgggct	ccttgaaaggc	300
ttgtcagttt	agtcttttga	ggtccccgag	taccatttta	agtgttacca	tgttactgct	360
gctgagtaat	agtgcaagtg	catttttaggt	gcggtcaccc	agaacttattc	aaaactagat	420
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tgggtatcag	gtgtcaatgc	atgacagggt	atgaatccat	ttgacttgag	acaacttttc	540
aaataagttt	atttgaagca	aaataaacta	ctgccaagaa	actttatgaa	agttccatct	600
caaaaagggc	aaaaaagggg	aattaactgc	tatgaattct	ttgcattcag	ggcgtcaaaa	660
gacgcgggcc	tgnggatgcc	gtgatgacca	attcttgaat	gagaaagcat	gtagaccgna	720
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<210> 479

<211> 815

<212> DNA

<213> Homo Sapiens

<400> 479

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tgagaacgat	gagcccatgg	aaataccatc	ggaagacgat	gggacgggtc	tgctctccac	180
ggttacagcc	cagtttccag	ggcggtgtgg	gcttcgctac	aggaatccag	tgctcagtg	240

tatgagaggt	gtccggctgg	tagaaggaat	tctgcatgcc	ccagatgctg	gctggggaaa	300
tctggtgtat	gttgtcaact	atccaaaaga	taacaaaaga	aaaatggatg	agacagatgc	360
ttcatcagca	gtgaaagtga	aaagagcagt	ccagaaaaca	tccgatttaa	tagtggtggg	420
tctcccatgg	aaaacaaccg	aacaggacct	gaaagagtat	tttagtacct	ttggagaagt	480
tcttatgggtg	cagggtcaaga	aagatcttaa	gactgggtcat	tcaaaggggt	ttggctttgt	540
tcgttttacg	gaatatgaaa	cacaagtga	agtaatgtca	cagcgacata	tgatagatgg	600
acgatgggtg	gactgcaaac	ttcctaattc	taagcaaagc	ccagatgaac	ctttgagaag	660
cagaaaagtg	tttgtggggg	cgctgtacag	angacatgac	tgangataan	cttcnggagt	720
tcttttttta	ataccgggat	gtgatggatg	cttcatttcc	caaccattc	agggcctttg	780
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<210> 480

<211> 812

<212> DNA

<213> Homo Sapiens

<400> 480

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agattgacca	aatagatttt	taaaaacaaa	tctttgccaa	atagtttaag	tacttttaaa	120
cttcaaaatc	ttcttagggg	aaaataaata	cccgatctta	tgcagtacca	ttaacatggt	180
aataaaaggc	cactcaacat	tgaaagcctt	ctatgaccag	taactgaaat	ttacacaagt	240
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tgctgagtaa	tagtgcaagt	gcattttagg	tgcggtcacc	cagacttatt	caaaactaga	420
tttcaaaaga	aaaaaaaaaa	ttttcacttt	ggccaatgca	agaacaaata	ccaattaagt	480
ctgggtatca	ggtgtcaatg	catgacaggt	gatgaatcca	tttgacttga	gacaactttt	540
caaataagtt	tatttgaagc	aaaataaact	actgccaaaga	aactttatga	aaagttccat	600
cttcaaaagg	ggtcaaaaaa	ggggaattaa	ctgctatgaa	ttctttgcat	tcanggctgc	660
aaaacaaaga	ccccatatta	tttaaaatcc	agttttattt	agaatttncc	accntggaca	720
acttcttatt	aaaaaggcnt	tccaggccca	nggaccacag	aaactgnang	ccaaacangc	780
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<210> 481

<211> 1127

<212> DNA

<213> Homo Sapiens

<400> 481

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gagaatccga	agaagaaaat	ctcaataaat	ctgaaataag	tcaagtgttt	gagattgcac	180
ttaaacggaa	cttgccctgtg	aatttcgagg	tgcccgggga	gagtggccca	ccccacatga	240
agaactttgt	gaccaaggtt	tcggttgggg	agtttgtggg	ggaaggtgaa	gggaaaagca	300
agaagatttc	aaagaaaaat	gccgccatag	ctgttcttga	ggagctgaag	aagttaccgc	360
ccctgcctgc	agttgaacga	gtaaagccta	gaatcaaaaa	gaaaacaaaa	cccatagtca	420
agccacagac	aagcccagaa	tatggccagg	ggatcaatcc	gattagccga	ctggcccaga	480
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cgcgccgcag	ggagttttgtg	atgcaggtga	aggttggaaa	ccacactgca	gaaggaaagg	600
gcaccaacaa	gaaggtggcc	aagcgcaatg	cagccgagaa	catgctggag	atccttgggt	660
tcaaagtccc	gcaggcgcag	cccaccaaac	ccgactcaa	gtcagaggag	aagacacca	720
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ctgctggaat	tcttcccatg	gtgcccagg	tcgcccaggc	tgtaggagtt	agtcaaggac	900
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aataacatct cttcaggcca cgtaccccat ggacctctca cgagaccctn tgagcaactg 1080
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<210> 482
<211> 773
<212> DNA
<213> Homo Sapiens

<400> 482
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tagtcaagcc acagacaagc ccagaatatg gccaggggat caatccgatt agccgactgg 120
cccagatcca gcaggcaaaa aaggagaagg agccagagta cacgctcctc acagagcgag 180
gcctcccgcg ccgcagggag tttgtgatgc aggtgaaggt tggaaaccac actgcagaag 240
gaacggggcac caacaagaag gtggccaagc gcaatgcagc cgagaacatg ctggagatcc 300
ttggtttcaa agtcccgcag gcgcagccca ccaaaccgcg actcaagtca gaggagaaga 360
caccataaaa gaaaccaggg gatggaagaa aagtaacctt ttttgaacct ggctctgggg 420
atgaaaatgg gactagtaat aaagaggatg agttcaggat gccttatcta agtcacagc 480
agctgcctgc tggaattctt cccatgggtgc ccgaggtcgc ccaggctgta ggagttagtc 540
aaggacatca caccaaagat tttaccaggg cagctccgaa tcctgccaaag gccacggtaa 600
ctgccatgat agcccagagag ttgttgatg ggggcacctc gccacagacc cgagaccatt 660
ttaaagaata acatctcttc aggccacgta ccccatggac ctctcacgag accctntgag 720
caactggact atctttncag agtccagga ttncaggtt aataccaaga ctt 773

<210> 483
<211> 794
<212> DNA
<213> Homo Sapiens

<400> 483
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ttgccagat ggaatcacaa gcattacaaa gtttttctt aaaaataaaa aaaggatagg 120
ggcaagttgg gaggggacca acctagcagt agnggcattt ganaataaat tancaaaaaa 180
atttagtatt accattnatt gatgacaaac acttaagttt tacttacatt ccatggggag 240
aaaaattcca gcgtaaacaa tgaatggaag cagtacttaa ctgcagggc taccaggctt 300
tccatacgga ccacacgcag agcctcagng cacacacttc tgtgtncagt ancacaacat 360
caaaagcaac acagntgtat acagaaacgt aggtcattct tttcagccct aanggatag 420
taattaacag tatcgagcac tntggaaaat cactctgcag gtttatatgg actacatgga 480
gatcatatcc tgtagtgtag tgaaagctaa gtcccaaga gccatatgta tagatncaca 540
atgtttttta ataactttta aaacagagat caaagttcat ttaagnctg tttgcattac 600
caaaaataaa aatgaaataa aaatggaacc aaatgaacat ctaangttta aaattcctaa 660
atnggccaat ttatncaact gngggggaga cttattcaag ggttttgaaa gtccaggaaac 720
tggtttcaag ctggaaccca gggggggccc acaatttggc attcncgtga aactggccct 780
ggggttaagc caaa 794

<210> 484
<211> 788
<212> DNA
<213> Homo Sapiens

<400> 484
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tcagtgccgt tgaaacacga ggtataaatg accaaggatt gtaacagagt gtgggggtga 120
gttcaaaggc ccagagactt ctgagtatgt tgatggatgt aaaaacatgc aatgaggtgg 180
acctggagaa ttctgcagat tgggaagtga agacaataac aagtgccttg aaacagtatt 240
tgaggagtct tccagagcct ctcatgacct atgagttaca tggagatttc attgttccag 300

ccttcctg	ccaaaagcgg	cagcccagaa	tctcgtgtta	atgcgatcca	tttcttggtg	cacaaactgc	360
cagagaagaa	taaagagatg	ttggatattt	tggtgaaaca	cttaacaaat	gtttcaaatc		420
actccaagca	gaacctgatg	actgtggcaa	acttaggagt	ggtgtttgga	ccaactctga		480
tgaggccaca	ggaagaaact	gtcgtctgct	catggacttg	aagtttcaga	atattgttgt		540
ggaaatctta	attgaaaacc	atgaaaagat	ttttcggacg	ccgnccgata	ctacattccc		600
tgagcccacc	tgcctgtcag	catcaccccc	aaatgcgcca	ccaangcagt	cnaagagaca		660
aggncagaga	accaagaagg	cccgtggggc	gtctacaatc	tttggctgga	gctggaaaga		720
tggtgacaat	ccttaccctt	tccanggagg	acaccctta	ccacagtctg	gactcacttt		780
tcttcccc							788

<210> 485

<211> 430

<212> DNA

<213> Homo Sapiens

<400> 485

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acagcacacg	ggtgaggagc	acgggagaag	cctgttaca	atacgccagt	gcacgctgcc	120
agtgcagtga	gtgtgggggtc	ctgcagggtg	ccgtctagga	agggcaggct	tgagacgcgc	180
gtctctgctt	ccctntgact	tgagaccatc	tcccttgnac	caacagcagc	ttntccaagc	240
taggctgcca	cagccaagca	cacactctgc	aaacctatca	ctgcgagtng	tacagttccc	300
tttanaatcg	nagcagcang	tgtcagggga	ggagagggag	ccnnngtggc	tctgggtggc	360
tgactgccag	tgnaggcgga	cacangtggc	ataaggctgc	ccgtcccctc	tcattcttat	420
atgctgngat						430

<210> 486

<211> 831

<212> DNA

<213> Homo Sapiens

<400> 486

aaagtgtagt	gccatcgaca	caggctgtca	cgttttcccc	ttcttttcac	aatcaagcaa	60
ttatggtgac	aaaaccagtg	caggaatata	aaaaggaata	cacagtgcag	caggccttgt	120
tttgtacttc	tggaattggt	acttctatac	cggtgccctt	ggcaggaagt	gcccttctcc	180
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attcaaattg	tgattctgcc	caagtgcata	ttgccacaaa	aaacagagaa	gaaaaagcag	300
cttgtctcag	aaatatattg	ttaccttcag	aacacaatcc	aggtaatcag	aatgatttta	360
aaccaactaa	tgacgatatt	gaaatgcaga	gttcctcaaa	attaccaa	gatcctgcaa	420
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tgacatcatt	ggaagttaca	aaaatgggtg	atgaacgtac	agattattta	actaaatctt	540
taaaggagaa	aaccctccca	ttttcccact	gtgatcaggc	agtgctgcaa	tgcaagtgaag	600
ctagtagcaa	taaggacatg	tttgctgacc	ggttatctaa	atctattatt	aaacattcca	660
tagataagag	caaatcagtg	atcccaaata	tagataaaaa	tgcaagtatac	aaggaaagct	720
tgcctgtttc	tgagagaagaa	tcacagttga	caccagaaaa	agtcttncca	aatttnctga	780
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<210> 487

<211> 728

<212> DNA

<213> Homo Sapiens

<400> 487

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atctctgctt	cccagggttc	agcaattctc	ctgccttagc	ctcccaagta	gctgggatta	120
cagggtgcctg	ccaccacgcc	tggctaattt	ttgtattttt	ggtagagacg	gggtttcacc	180

atgttgccca	ggctgggtctt	gaactcctga	cctcaagtga	tccaccccca	ccccattgg	240
cttcccagag	ttctgggatt	acaggcgtga	atcacgcgc	ccagcccaaa	tcgccgaagt	300
ttttatctcc	taccttgatc	tctgtagcag	aaaagaacag	tatagatata	aattgtcatc	360
aacagatgca	acatatcttg	taaatcaata	tattttcaag	tgaggctctt	gaatcacctg	420
cactgaaatc	atctgtgatg	cttatcaagc	atgcagattc	tcaggaccct	tcactgactt	480
cataaatctt	catctctgga	ggtgagaccc	tggacactgt	atatgcaacg	agcacaccac	540
caatcctgga	tgagccccc	tttttctctg	tgccagaacc	ttaatgccac	gcagcattac	600
attaagtcac	attacaactt	tgggtcaatg	aaacacaggg	tctttttctg	acaaaatgcc	660
atcaagccag	gtttggctcc	ccacttaagt	tcaaantttt	aatcattaat	tttctgagcc	720
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<210> 488

<211> 788

<212> DNA

<213> Homo Sapiens

<400> 488

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tggacttcac	ccaggaagaa	tggtaccatg	tcgaccctgc	tcagaggagc	ttatacaggg	180
atgtgatgct	ggagaactat	agccacctgg	tttctcttgg	atatcaagtt	tccaagccag	240
aggtgatctt	caaattggag	caaggagaag	agccatggat	atcagaggga	gaaatccaac	300
gacctttcta	tccagactgg	aagaccaggc	ctgaagtcaa	atcatcacat	ttgcagcagg	360
atgtatcaga	agtatcccac	tgcacacatg	atctcttaca	tgctacatta	gaagactcct	420
gggatgttag	cagccagtta	gacgggcaac	aggaaaaactg	gaagagacat	ctgggatcag	480
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gtgaaaattc	tagattgaac	accaatttgg	ttacacaact	gaacattcct	gcaagaataa	600
ggcctagtga	atgtgagacc	cttgggaagca	atttgggaca	taatgcagac	ttacttaatg	660
agaataatat	tcttgcaaaa	aagaaaccct	tttagtgnga	taatgtagaa	aagnctttan	720
tcatagatca	tcgnttacta	aaccttgaga	aaacccttta	anggaaaagg	gagctttcct	780
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<210> 489

<211> 875

<212> DNA

<213> Homo Sapiens

<400> 489

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tatctgcctt	agccacccaa	agtgtctggga	ttacaggtgt	gagacaccat	acctagccaa	120
gttaattttt	ttaattgggtga	aatcttttct	ttgcacataa	aatgagccag	tgcatgttgc	180
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gaaaattaac	gggaaaattc	tcctcttagt	tttctgttgt	tttccattg	atctgatact	300
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aaaaagtcac	tagtagttca	accatctaca	gtttctgtta	aattgtgggt	tgtaagcctc	480
caagaagttg	ctttaaatag	tttgtgataa	atttgcatac	attttgctcc	cacttatact	540
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<210> 490

<211> 844
 <212> DNA
 <213> Homo Sapiens

<400> 490
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 aaggtgaagg gaaaagcaag aagatttcaa agaaaaatgc cgccatagct gttcttgagg 180
 agctgaagaa gttaccgccc ctgcctgcag ttgaacgagt aaagcctaga atcaaaaaga 240
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 tcacagagcg aggcctcccg cgcgcaggag agtttgtgat gcaggtgaag gttggaaacc 420
 aactgcaga aggaacgggc accaacaaga aggtggccaa gcgcaatgca gccgagaaca 480
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 taagtcatca gcagctgctt gctggaattc tttccatggg gcccgangtc gcccaagctg 720
 taggaagtta gtcaaggaca tnacacccaa gattttacca ggcagcttcg aatcttgcca 780
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<210> 491
 <211> 825
 <212> DNA
 <213> Homo Sapiens

<400> 491
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 ggcaagttgg gaggggacca acctagcagt agtggcattt gagaataaat taacaaaaaa 180
 atttagtatt accatttatt gatgacaaac acttaagttt tacttacatt ccatggggag 240
 aaaaattcca gcgtaaacaa tgaatggaag cagtacttaa ctgcgagggc taccaggctt 300
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 caaaagcaac acagctgtat acagaaacgt aggtcattct tttcagccct aatggagatg 420
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 gatcatatcc tgtagtgtag tgaaagctaa gtccctcaaga gccatatgta tagatacaca 540
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 acaaaaataa aatatganaat aaaaatggac caaatgatca tctaaagttt aaaattccta 660
 aatggtccaa tttatacaac tggggggagac ttattcaagg tttttgaaag tccaggactg 720
 gtttcagctg aaccagangg cccccaattt gcatacctgg aactgncttg ggttttagcca 780
 aggaaattaa aaaagnctta acccccttcc cctgggattt gaacc 825

<210> 492
 <211> 946
 <212> DNA
 <213> Homo Sapiens

<400> 492
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 gagaatccga agaagaaaat ctcaataaat ctgaaataag tcaagtgttt gagattgcac 180
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ggcaccaaca	agaaggtggc	caagcgcaat	gcacccgaga	acatgctgga	gatccttggt	660
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attaaggaaa	ccangggatg	gaagaaaagt	ancnttttga	anctggctnt	tgggattaaa	780
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gctggaaatc	tttccatggg	ggccgaggtc	ncccagcttt	taggagttat	canggcctnt	900
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<210> 493

<211> 804

<212> DNA

<213> Homo Sapiens

<400> 493

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ttcctgattt	tgcatgttct	cattcccaaa	gtagtctacc	ttagttttaca	ctcaaaggta	180
gcacttggtg	aaactacatg	acagaaacag	gctgcaaagg	tggacaaggg	gaagcatgtc	240
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cattatagag	ccgttttgatt	ccatcataga	agtcattccac	ttccattttcc	tctactttgc	360
gttttagtaga	ggtctgcttg	caccactgg	cagctgggag	atgatggtaa	aaggctgctg	420
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aagcttccga	ccatggatca	actgggagct	atncatctgg	ctttctgaag	cagntcaatt	660
gtaagagaaa	gcccaatccn	ggaatggagt	tcttccattt	tcagactaac	cctgggcnctn	720
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<210> 494

<211> 856

<212> DNA

<213> Homo Sapiens

<400> 494

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<210> 495

<211> 757

<212> DNA

<213> Homo Sapiens

<400> 495

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agataagatt ttatttttca aattacatat tatgccaaacc agcctgcttt ggactcagag	180
gttcaaaaac tttgctttta ttacgaagaa catntggact gtagacacct ntaacgaaac	240
caggttatac ttggcatatt gngattgaag ctgtgtgac aacatcttaa tgacctaaact	300
aaatcctntc ataacagaaa gaagttcaac aggcacaacat ttccctccct aggatccctag	360
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cttaaagaga aataaaggca ttaaaccact tttttatatg tcaaggaaat ataatttngc	600
tattctttca taatcaaate tttcaatgga tttctaagac tggnttctac agcctgngng	660
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<210> 496

<211> 1759

<212> DNA

<213> Homo Sapiens

<400> 496

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accaggaaga gcagctgaca gtgaattcaa aggcattaga gattcttgac aagatttctc	180
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tggacaccga gggcctgggc gatgtagaaa agagtaaccc taagaatgac tctgtgatct	420
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tggaggctca agagagaagc tttcaggaat acatggncca aatggagaag aagttggagg	1680
angaaaggga aaacntntc agagagcctt gaaaagggtg ctaaaacaca agcttgaagg	1740
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<210> 497

<211> 842

<212> DNA

<213> Homo Sapiens

<400> 497

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tgagagaggg	aatcattgtc	actggaaagc	ggctggggac	tctggtggtg	acttatgtag	180
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agaagcttgt	ggacaccata	gagaaaaaga	agggagactt	tgtgctgcag	aatgaagagg	480
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<210> 498

<211> 707

<212> DNA

<213> Homo Sapiens

<400> 498

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tcaaaggggg	ttgttctctg	gcgggcagag	gtgggtgtca	caagtgtctt	agtgggggag	180
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atgtacatgc	aggtcacagg	ggatatgatg	gcttagcttg	ggctcagagg	cctgacattt	360
agtatatatta	ctggaatatt	caggtcttta	aatacgtgag	ccaagatatt	ttgtccctac	420
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gatctttaag	agccttaact	gttcattttt	agtgttttca	attttttctt	tcagttgatt	540
aatctcttta	tttaactgct	cagattttct	ttgaaattct	tccttaagca	tttcttcttg	600
naccttcagc	ttgggggtta	acagcctttc	atgctctctg	aaaagggttt	ncctttcctn	660
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<210> 499

<211> 772

<212> DNA

<213> Homo Sapiens

<400> 499

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agtcacaggt ggtttagag gaatccatcc tgcagtcaga caaagccctc actgctggag	540
agaaggccat agcagcggag cgggccatga aggaagcagc tgagaaggaa caggagctgc	600
taagagaaaa acagaaggag cagcagcaaa tgatggaggc tcaagagaga agctttcagg	660
aatacatggn ccaaattggag aagaagttgg aggangaaag ggaaaacnt ntcagagagc	720
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<210> 500

<211> 787

<212> DNA

<213> Homo Sapiens

<400> 500

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gcgattgaac agttcttgct ctctctcttt ctctgtcatc tgttccagac gggccctgtc	120
ttctctatct cccatgaggt cttctccata gccatcatgg aactcttcat cttctgagga	180
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<210> 501

<211> 886

<212> DNA

<213> Homo Sapiens

<400> 501

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<210> 502

<211> 626

<212> DNA

<213> Homo Sapiens

<400> 502

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ngtcaaaggg	ggttggtctn	tggcgggcaa	agggggngt	cacaagttgc	ttannggggg	180
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tttggggcca	tgntattncc	tgggaa				626

<210> 503

<211> 884

<212> DNA

<213> Homo Sapiens

<400> 503

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<210> 504

<211> 612

<212> DNA

<213> Homo Sapiens

<400> 504

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<210> 505

<211> 2215

<212> DNA

<213> Homo Sapiens

<400> 505

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<211> 742

<212> DNA

<213> Homo Sapiens

<400> 506

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 <212> DNA
 <213> Homo Sapiens

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<211> 651

<212> DNA

<213> Homo Sapiens

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<210> 511

<211> 712

<212> DNA

<213> Homo Sapiens

<400> 511

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<210> 512

<211> 850

<212> DNA

<213> Homo Sapiens

<400> 512

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 <211> 685
 <212> DNA
 <213> Homo Sapiens

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 <212> DNA
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<210> 518

<211> 926

<212> DNA

<213> Homo Sapiens

<400> 518

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<211> 789

<212> DNA

<213> Homo Sapiens

<400> 519

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<211> 827

<212> DNA

<213> Homo Sapiens

<400> 520

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<210> 521

<211> 710

<212> DNA

<213> Homo Sapiens

<400> 521

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<210> 522

<211> 638

<212> DNA

<213> Homo Sapiens

<400> 522

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<210> 523

<211> 833

<212> DNA

<213> Homo Sapiens

<400> 523

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<210> 524

<211> 766

<212> DNA

<213> Homo Sapiens

<400> 524

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<210> 525

<211> 847

<212> DNA

<213> Homo Sapiens

<400> 525

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<210> 526

<211> 746

<212> DNA

<213> Homo Sapiens

<400> 526

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<210> 527

<211> 837

<212> DNA

<213> Homo Sapiens

<400> 527

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<210> 528

<211> 822

<212> DNA

<213> Homo Sapiens

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<210> 529

<211> 842

<212> DNA

<213> Homo Sapiens

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<210> 530

<211> 815

<212> DNA

<213> Homo Sapiens

<400> 530

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<400> 531

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 <212> DNA
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<400> 532

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<210> 534

<211> 789

<212> DNA

<213> Homo Sapiens

<400> 534

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<211> 802

<212> DNA

<213> Homo Sapiens

<400> 535

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<211> 901

<212> DNA

<213> Homo Sapiens

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<211> 761

<212> DNA

<213> Homo Sapiens

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<210> 538

<211> 869

<212> DNA

<213> Homo Sapiens

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<210> 539
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 <212> DNA
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 <212> DNA
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<211> 830

<212> DNA

<213> Homo Sapiens

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<212> DNA

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<212> DNA

<213> Homo Sapiens

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<213> Homo Sapiens

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gggccgggtcc ctgcgagggg cccaagcagg tgagaccgaa gaagccgaaa tgtgaacgcc 2700
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cccaggccgg cagaggagcc catggagcag gagcctgccc tgtgacgcc cggcccccat 2820
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<210> 547

<211> 897

<212> PRT

<213> Homo Sapiens

<400> 547

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Glu Phe Leu Leu Ser Lys Ser Lys Glu Pro Thr Pro Gly Gly Leu Asn
 1           5           10           15
His Ser Leu Pro Gln His Pro Lys Cys Trp Gly Ala His His Ala Ser
          20           25           30
Leu Asp Gln Ser Ser Pro Pro Gln Ser Gly Pro Pro Gly Thr Pro Pro
          35           40           45
Ser Tyr Lys Leu Pro Leu Pro Gly Pro Tyr Asp Ser Arg Asp Asp Phe
          50           55           60
Pro Leu Arg Lys Thr Ala Ser Glu Pro Asn Leu Lys Val Arg Ser Arg
65           70           75           80
Leu Lys Gln Lys Val Ala Glu Arg Arg Ser Ser Pro Leu Leu Arg Arg
          85           90           95
Lys Asp Gly Thr Val Ile Ser Thr Phe Lys Lys Arg Ala Val Glu Ile
          100          105          110
Thr Gly Ala Gly Pro Gly Ala Ser Ser Val Cys Asn Ser Ala Pro Gly
          115          120          125
Ser Gly Pro Ser Ser Pro Asn Ser Ser His Ser Thr Ile Ala Glu Asn
          130          135          140
Gly Phe Thr Gly Ser Val Pro Asn Ile Pro Thr Glu Met Leu Pro Gln
145          150          155          160
His Arg Ala Leu Pro Leu Asp Ser Ser Pro Asn Gln Phe Ser Leu Tyr
          165          170          175
Thr Ser Pro Ser Leu Pro Asn Ile Ser Leu Gly Leu Gln Ala Thr Val
          180          185          190
Thr Val Thr Asn Ser His Leu Thr Ala Ser Pro Lys Leu Ser Thr Gln
          195          200          205
Gln Glu Ala Glu Arg Gln Ala Leu Gln Ser Leu Arg Gln Gly Gly Thr

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      210              215              220
Leu Thr Gly Lys Phe Met Ser Thr Ser Ser Ile Pro Gly Cys Leu Leu
225              230              235              240
Gly Val Ala Leu Glu Gly Asp Gly Ser Pro His Gly His Ala Ser Leu
      245              250              255
Leu Gln His Val Leu Leu Leu Glu Gln Ala Arg Gln Gln Ser Thr Leu
      260              265              270
Ile Ala Val Pro Leu His Gly Gln Ser Pro Leu Val Thr Gly Glu Arg
      275              280              285
Val Ala Thr Ser Met Arg Thr Val Gly Lys Leu Pro Arg His Arg Pro
      290              295              300
Leu Ser Arg Thr Gln Ser Ser Pro Leu Pro Gln Ser Pro Gln Ala Leu
305              310              315              320
Gln Gln Leu Val Met Gln Gln Gln His Gln Gln Phe Leu Glu Lys Gln
      325              330              335
Lys Gln Gln Gln Leu Gln Leu Gly Lys Ile Leu Thr Lys Thr Gly Glu
      340              345              350
Leu Pro Arg Gln Pro Thr Thr His Pro Glu Glu Thr Glu Glu Leu
      355              360              365
Thr Glu Gln Gln Glu Val Leu Leu Gly Glu Gly Ala Leu Thr Met Pro
      370              375              380
Arg Glu Gly Ser Thr Glu Ser Glu Ser Thr Gln Glu Asp Leu Glu Glu
385              390              395              400
Glu Asp Glu Glu Glu Asp Gly Glu Glu Glu Glu Asp Cys Ile Gln Val
      405              410              415
Lys Asp Glu Glu Gly Glu Ser Gly Ala Glu Glu Gly Pro Asp Leu Glu
      420              425              430
Glu Pro Gly Ala Gly Tyr Lys Lys Leu Phe Ser Asp Ala Gln Pro Leu
      435              440              445
Gln Pro Leu Gln Val Tyr Gln Ala Pro Leu Ser Leu Ala Thr Val Pro
      450              455              460
His Gln Ala Leu Gly Arg Thr Gln Ser Ser Pro Ala Ala Pro Gly Gly
465              470              475              480
Met Lys Asn Pro Pro Asp Gln Pro Val Lys His Leu Phe Thr Thr Ser
      485              490              495
Val Val Tyr Asp Thr Phe Met Leu Lys His Gln Cys Met Cys Gly Asn
      500              505              510
Thr His Val His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser
      515              520              525
Arg Leu Gln Glu Thr Gly Leu Leu Ser Lys Cys Glu Arg Ile Arg Gly
      530              535              540
Arg Lys Ala Thr Leu Asp Glu Ile Gln Thr Val His Ser Glu Tyr His
545              550              555              560
Thr Leu Leu Tyr Gly Thr Ser Pro Leu Asn Arg Gln Lys Leu Asp Ser
      565              570              575
Lys Lys Leu Leu Gly Pro Ile Ser Gln Lys Met Tyr Ala Val Leu Pro
      580              585              590
Cys Gly Gly Ile Gly Val Asp Ser Asp Thr Val Trp Asn Glu Met His
      595              600              605
Ser Ser Ser Ala Val Arg Met Ala Val Gly Cys Leu Leu Glu Leu Ala
      610              615              620
Phe Lys Val Ala Ala Gly Glu Leu Lys Asn Gly Phe Ala Ile Ile Arg
625              630              635              640
Pro Pro Gly His His Ala Glu Glu Ser Thr Ala Met Gly Phe Cys Phe
      645              650              655

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Phe Asn Ser Val Ala Ile Thr Ala Lys Leu Leu Gln Gln Lys Leu Asn
 660 665 670
 Val Gly Lys Val Leu Ile Val Asp Trp Asp Ile His His Gly Asn Gly
 675 680 685
 Thr Gln Gln Ala Phe Tyr Asn Asp Pro Ser Val Leu Tyr Ile Ser Leu
 690 695 700
 His Arg Tyr Asp Asn Gly Asn Phe Phe Pro Gly Ser Gly Ala Pro Glu
 705 710 715 720
 Glu Val Gly Gly Gly Pro Gly Val Gly Tyr Asn Val Asn Val Ala Trp
 725 730 735
 Thr Gly Gly Val Asp Pro Pro Ile Gly Asp Val Glu Tyr Leu Thr Ala
 740 745 750
 Phe Arg Thr Val Val Met Pro Ile Ala His Glu Phe Ser Pro Asp Val
 755 760 765
 Val Leu Val Ser Ala Gly Phe Asp Ala Val Glu Gly His Leu Ser Pro
 770 775 780
 Leu Gly Gly Tyr Ser Val Thr Ala Arg Cys Phe Gly His Leu Thr Arg
 785 790 795 800
 Gln Leu Met Thr Leu Ala Gly Gly Arg Val Val Leu Ala Leu Glu Gly
 805 810 815
 Gly His Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ser
 820 825 830
 Ala Leu Leu Ser Val Lys Leu Gln Pro Leu Asp Glu Ala Val Leu Gln
 835 840 845
 Gln Lys Pro Asn Ile Asn Ala Val Ala Thr Leu Glu Lys Val Ile Glu
 850 855 860
 Ile Gln Ser Lys His Trp Ser Cys Val Gln Lys Phe Ala Ala Gly Leu
 865 870 875 880
 Gly Arg Ser Leu Arg Gly Ala Gln Ala Gly Glu Thr Glu Glu Ala Glu
 885 890 895
 Met

<210> 548
 <211> 1298
 <212> DNA
 <213> Homo Sapiens

<400> 548
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 tgatggagag agaaagcadc naaagcttct ggaagcaatc agttcccttg atggaaagaa 180
 taggcggaaa ttggctgana ggtctgaggg tagtctgaag gtgtcagagt tcaatgtcag 240
 ttctgaagga tcaggagaaa agctggctct tgcagatctg cttgagcctg ttaaaacttc 300
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 gttacctctg aacaaagaag agattgaacg gatccacaga gaatagcatt caataaaacg 420
 cacaagtcct ctccaaatgg gacctgtcgc tctgaagaa ccggcaggca gagcagctgg 480
 tttttcccct ggagaaagag gagccagcca ttgctcccat tgaacatgtg ctcaagtggct 540
 ggaaggcaag aactcccctg gagcaggaaa ttttcaacct cctccataag aacaagcagc 600
 cagtgcagaa ccctttactg accctgtggg aaaaggcctc tctccgagcc atgagcctag 660
 aagaggcaaa gatgcgacga gcagagcttc agagggtctg ggctctgcag tcctactatg 720
 angccaaggc tcgaagagag aagaaaatcn aaagttaaaa gtatcacaaa gtcgtgaaga 780
 aaggaaaggc caagaaagcc ctaaaagagt ttgagcagct gcggaagggt aatccagctg 840
 ccgcactaga agaacgaaga aaagaggaaa gaaggaggag gagaaagaag aagaacaagg 900
 agaagaagaa agaagaaggg agaaggagaa gaaaagaagg agaagaggaa aaggaagaag 960

gagaaagaaa aggagaagga aaaggaaaag aaggagaaga aagaagaact aagaagaagg 1020
 agaggaagaa taagaaggaa agaagaaaga aaaaagttaa agaagaagaa agaaggaaga 1080
 aggaaagaag aggaagaact nagaagaaga aagaggagga aagaagaaaag aagaataagg 1140
 aacnagaaaag aaggagaaga aagaataaga agaggaagaa gaaaaagaag aaaagaagaa 1200
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<210> 549
 <211> 236
 <212> PRT
 <213> Homo Sapiens

<400> 549
 Ala Ala Glu Met Thr Ala Asn Arg Leu Ala Glu Ser Leu Leu Ala Leu
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 Ser Gln Glu Glu Leu Ala Asp Leu Pro Lys Asp Tyr Leu Leu Ser Glu
 20 25 30
 Ser Glu Asp Glu Gly Asp Asn Asp Gly Glu Arg Lys His Lys Leu Leu
 35 40 45
 Glu Ala Ile Ser Ser Leu Asp Gly Lys Asn Arg Arg Lys Leu Ala Arg
 50 55 60
 Ser Glu Ala Ser Leu Lys Val Ser Glu Phe Asn Val Ser Ser Glu Gly
 65 70 75 80
 Ser Gly Glu Lys Leu Val Leu Ala Asp Leu Leu Glu Pro Val Lys Thr
 85 90 95
 Ser Ser Ser Leu Ala Thr Val Lys Lys Gln Leu Ser Arg Val Ser Lys
 100 105 110
 Thr Val Glu Leu Pro Leu Asn Lys Glu Glu Ile Glu Arg Ile His Arg
 115 120 125
 Glu Ile Ala Phe Asn Lys Thr His Lys Ser Ser Pro Asn Gly Thr Leu
 130 135 140
 Ser Ser Val Leu Lys Asn Arg Gln Ala Glu Gln Leu Val Phe Pro Leu
 145 150 155 160
 Glu Lys Glu Glu Pro Ala Ile Ala Pro Ile Glu His Val Leu Ser Gly
 165 170 175
 Trp Lys Ala Arg Thr Pro Leu Glu Gln Glu Ile Phe Asn Leu Leu His
 180 185 190
 Lys Asn Lys Gln Pro Val Thr Asp Pro Leu Leu Thr Pro Val Glu Lys
 195 200 205
 Ala Ser Leu Arg Ala Met Ser Leu Glu Glu Ala Lys Met Arg Arg Ala
 210 215 220
 Glu Leu Gln Arg Ala Arg Ala Leu Gln Ser Tyr Tyr
 225 230 235

<210> 550
 <211> 2236
 <212> DNA
 <213> Homo Sapiens

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 ttccggcata aggtggattt tctgattgaa aatgatgcag agaaggacta tctctatgat 180
 gtgctgcgaa tgtaccacca gaccatggac gtggccgtgc tctgaggaga cctgaagctg 240
 gtcacatg aaccagccg tctgcctctg tttgatgcca ttcggccgct gatccactg 300

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taagacccca ctggagtctc tctctctcca tccctctct ctgcccctct ctctaattgc 2160
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ttccagctta aaaaaa 2236

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<210> 551

<211> 652

<212> PRT

<213> Homo Sapiens

<400> 551

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Ile Glu Asn Asp Ala Glu Lys Asp Tyr Leu Tyr Asp Val Leu Arg Met
20          25          30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
35          40          45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
50          55          60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65          70          75          80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
85          90          95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
100         105         110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu

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      115              120              125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
      130              135              140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145              150              155              160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
      165              170              175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
      180              185              190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
      195              200              205
Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
      210              215              220
Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
225              230              235              240
Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
      245              250              255
Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
      260              265              270
Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
      275              280              285
Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
      290              295              300
Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305              310              315              320
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
      325              330              335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
      340              345              350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
      355              360              365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
      370              375              380
Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
385              390              395              400
Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
      405              410              415
Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Asp Phe Arg Lys
      420              425              430
Tyr Glu Glu Gly Phe Asp Pro Tyr Ser Met Phe Thr Pro Glu Gln Ile
      435              440              445
Met Gly Lys Asp Val Arg Leu Leu Arg Ile Lys Lys Glu Gly Ser Leu
      450              455              460
Asp Leu Ala Leu Glu Gly Gly Val Asp Ser Pro Ile Gly Lys Val Val
465              470              475              480
Val Ser Ala Val Tyr Glu Arg Gly Ala Ala Glu Arg His Gly Gly Ile
      485              490              495
Val Lys Gly Asp Glu Ile Met Ala Ile Asn Gly Lys Ile Val Thr Asp
      500              505              510
Tyr Thr Leu Ala Glu Ala Asp Ala Ala Leu Gln Lys Ala Trp Asn Gln
      515              520              525
Gly Gly Asp Trp Ile Asp Leu Val Val Ala Val Cys Pro Pro Lys Glu
      530              535              540
Tyr Asp Asp Glu Leu Thr Phe Leu Leu Lys Ser Lys Arg Gly Asn Gln
545              550              555              560

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2162

<210> 553
 <211> 403
 <212> PRT
 <213> Homo Sapiens

<400> 553

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Met Asp Arg Lys Val Ala Arg Glu Phe Arg His Lys Val Asp Phe Leu
 1           5           10           15
Ile Glu Asn Asp Ala Glu Lys Asp Tyr Leu Tyr Asp Val Leu Arg Met
          20           25           30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
          35           40           45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
          50           55           60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65           70           75           80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
          85           90           95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
          100          105          110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
          115          120          125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
          130          135          140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145          150          155          160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
          165          170          175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
          180          185          190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
          195          200          205
Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
210          215          220
Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
225          230          235          240
Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
          245          250          255
Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
          260          265          270
Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
          275          280          285
Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
          290          295          300
Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305          310          315          320
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
          325          330          335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
          340          345          350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
          355          360          365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu

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370 375 380
 Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
 385 390 395 400
 Lys Pro Lys

<210> 554
 <211> 1789
 <212> DNA
 <213> Homo Sapiens

<400> 554
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 aaagagcaac taaagcataa agaatttctt ctggctgcta atacttgtaa ccgtgttgggt 180
 ggtctttgtt tgaaatgtgc tcagcatgaa gctgttcttt cccaaaccca tactaatgtt 240
 catatgcaga ccatcgaaaag actgggttaa gaaagagatg acttgatgtc tgcactagtt 300
 tccgtaagga gcagcttggc agatacgag caaagagaag caagtgccta tgaacagggtg 360
 aaacaagttt tgcaaatatc tgaggaagcc aattttgaaa aaaccaaggc tttaatccag 420
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 agccagctgg cttctcggga aatggatgtc acaaagggtg gtggagaaat gcgctatcag 720
 ctgaataaaa ccaacatgga gaaggatgag gcagaaaagg agcacagaga gttcagagca 780
 aaaactaaca gggatcttga aattaaagat caggaaatag agaaattgag aatagaactg 840
 gatgaaagca aacaacactt ggaacaggag cagcagaagg cagccctggc cagagaggag 900
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 gactcctggg gtatgttttc agaaatggct tgaagttatg tgtttaaata tgctcattcg 1740
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<210> 555
 <211> 493
 <212> PRT
 <213> Homo Sapiens

<400> 555
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 Glu Ile Glu Glu Ser Gln Leu Lys Phe Leu Arg Asn Asp Leu Ala Glu
 20 25 30
 Tyr Gln Arg Thr Cys Glu Asp Leu Lys Glu Gln Leu Lys His Lys Glu
 35 40 45

Phe Leu Leu Ala Ala Asn Thr Cys Asn Arg Val Gly Gly Leu Cys Leu
 50 55 60
 Lys Cys Ala Gln His Glu Ala Val Leu Ser Gln Thr His Thr Asn Val
 65 70 75 80
 His Met Gln Thr Ile Glu Arg Leu Val Lys Glu Arg Asp Asp Leu Met
 85 90 95
 Ser Ala Leu Val Ser Val Arg Ser Ser Leu Ala Asp Thr Gln Gln Arg
 100 105 110
 Glu Ala Ser Ala Tyr Glu Gln Val Lys Gln Val Leu Gln Ile Ser Glu
 115 120 125
 Glu Ala Asn Phe Glu Lys Thr Lys Ala Leu Ile Gln Cys Asp Gln Leu
 130 135 140
 Arg Lys Glu Leu Glu Arg Gln Ala Glu Arg Leu Glu Lys Glu Leu Ala
 145 150 155 160
 Ser Gln Gln Glu Lys Arg Ala Ile Glu Lys Asp Met Met Lys Lys Glu
 165 170 175
 Ile Thr Lys Glu Arg Glu Tyr Met Gly Ser Lys Met Leu Ile Leu Ser
 180 185 190
 Gln Asn Ile Ala Gln Leu Glu Ala Gln Val Glu Lys Val Thr Lys Glu
 195 200 205
 Lys Ile Ser Ala Ile Asn Gln Leu Glu Glu Ile Gln Ser Gln Leu Ala
 210 215 220
 Ser Arg Glu Met Asp Val Thr Lys Val Cys Gly Glu Met Arg Tyr Gln
 225 230 235 240
 Leu Asn Lys Thr Asn Met Glu Lys Asp Glu Ala Glu Lys Glu His Arg
 245 250 255
 Glu Phe Arg Ala Lys Thr Asn Arg Asp Leu Glu Ile Lys Asp Gln Glu
 260 265 270
 Ile Glu Lys Leu Arg Ile Glu Leu Asp Glu Ser Lys Gln His Leu Glu
 275 280 285
 Gln Glu Gln Gln Lys Ala Ala Leu Ala Arg Glu Glu Cys Leu Arg Leu
 290 295 300
 Thr Glu Leu Leu Gly Glu Ser Glu His Gln Leu His Leu Thr Arg Gln
 305 310 315 320
 Glu Lys Asp Ser Ile Gln Gln Ser Phe Ser Lys Glu Ala Lys Ala Gln
 325 330 335
 Ala Leu Gln Ala Gln Gln Arg Glu Gln Glu Leu Thr Gln Lys Ile Gln
 340 345 350
 Gln Met Glu Ala Gln His Asp Lys Thr Glu Asn Glu Gln Tyr Leu Leu
 355 360 365
 Leu Thr Ser Gln Asn Thr Phe Leu Thr Lys Leu Lys Glu Glu Cys Cys
 370 375 380
 Thr Leu Ala Lys Lys Leu Glu Gln Ile Ser Gln Lys Thr Arg Ser Glu
 385 390 395 400
 Ile Ala Gln Leu Ser Gln Glu Lys Arg Tyr Thr Tyr Asp Lys Leu Gly
 405 410 415
 Lys Leu Gln Arg Arg Asn Glu Glu Leu Glu Glu Gln Cys Val Gln His
 420 425 430
 Gly Arg Val His Glu Thr Met Lys Gln Arg Leu Arg Gln Leu Asp Lys
 435 440 445
 His Ser Gln Ala Thr Ala Gln Gln Leu Val Gln Leu Leu Ser Lys Gln
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 Asn Gln Leu Leu Leu Glu Arg Gln Ser Leu Ser Glu Glu Val Asp Arg
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 Leu Arg Thr Gln Leu Pro Ser Met Pro Gln Ser Asp Cys

485

490

<210> 556
 <211> 1306
 <212> DNA
 <213> Homo Sapiens

<400> 556

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cggcaaagga	gaaaagaaat	tgcccagaag	gcagcagagg	aaaatgagag	ataccggaag	240
gagatggaac	agattgtaga	ggaggaagag	aagttaaaga	agcaatggga	agaagactgg	300
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<210> 557
 <211> 328
 <212> PRT
 <213> Homo Sapiens

<400> 557

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			20				25						30			
Arg	Lys	Glu	Met	Glu	Gln	Ile	Val	Glu	Glu	Glu	Glu	Lys	Phe	Lys	Lys	
			35				40					45				
Gln	Trp	Glu	Glu	Asp	Trp	Gly	Ser	Lys	Glu	Gln	Leu	Leu	Leu	Pro	Lys	
			50			55					60					
Thr	Ile	Thr	Ala	Glu	Val	His	Pro	Val	Pro	Leu	Arg	Lys	Pro	Lys	Tyr	
65					70					75				80		
Asp	Gln	Gly	Val	Glu	Pro	Glu	Leu	Glu	Pro	Ala	Asp	Asp	Leu	Asp	Gly	
			85						90				95			
Gly	Thr	Glu	Glu	Gln	Gly	Glu	Gln	Asp	Phe	Arg	Lys	Tyr	Glu	Glu	Gly	
			100					105					110			
Phe	Asp	Pro	Tyr	Ser	Met	Phe	Thr	Pro	Glu	Gln	Ile	Met	Gly	Lys	Asp	
			115				120					125				
Val	Arg	Leu	Leu	Arg	Ile	Lys	Lys	Glu	Gly	Ser	Leu	Asp	Leu	Ala	Leu	
			130			135						140				

Glu Gly Gly Val Asp Ser Pro Ile Gly Lys Val Val Val Ser Ala Val
 145 150 155 160
 Tyr Glu Arg Gly Ala Ala Glu Arg His Gly Gly Ile Val Lys Gly Asp
 165 170 175
 Glu Ile Met Ala Ile Asn Gly Lys Ile Val Thr Asp Tyr Thr Leu Ala
 180 185 190
 Glu Ala Asp Ala Ala Leu Gln Lys Ala Trp Asn Gln Gly Gly Asp Trp
 195 200 205
 Ile Asp Leu Val Val Ala Val Cys Pro Pro Lys Glu Tyr Asp Asp Glu
 210 215 220
 Leu Thr Phe Leu Leu Lys Ser Lys Arg Gly Asn Gln Ile His Ala Leu
 225 230 235 240
 Gly Asn Ser Glu Leu Arg Pro His Leu Val Asn Thr Lys Pro Arg Thr
 245 250 255
 Ser Leu Glu Arg Gly His Met Thr His Thr Arg Trp His Pro Trp Asp
 260 265 270
 Leu Asn Leu Ser Pro Arg Asn Leu Lys Leu Pro Leu Ala Leu Asn Gln
 275 280 285
 Gly Gln Ile Arg Asn Ser Ser Gly His Phe Phe Glu Gly Gln Cys Gly
 290 295 300
 Gly Lys Gly Ala Ala Ser Arg Leu Gly Glu Asp Leu Lys Asp Pro Asp
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 Ser His Ser Phe Pro Leu Ala Gln
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<210> 558
 <211> 2289
 <212> DNA
 <213> Homo Sapiens

<400> 558
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ccactggagt ctctctctct ccatccctct cctctgccct ctgctcta at tgctgccagg 2220
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<210> 559

<211> 481

<212> PRT

<213> Homo Sapiens

<400> 559

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Met Asp Arg Lys Val Ala Arg Glu Phe Arg His Lys Val Asp Phe Leu
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Ile Glu Asn Asp Ala Glu Lys Asp Tyr Leu Tyr Asp Val Leu Arg Met
          20          25          30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
          35          40          45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
          50          55          60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65          70          75          80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
          85          90          95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
          100          105          110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
          115          120          125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
          130          135          140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145          150          155          160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
          165          170          175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
          180          185          190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
          195          200          205
Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
          210          215          220
Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
225          230          235          240
Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
          245          250          255
Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys

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Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
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Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
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Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305                310                315                320
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
                325                330                335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
                340                345                350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
                355                360                365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
                370                375                380
Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
385                390                395                400
Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
                405                410                415
Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Pro Gln Glu Met
                420                425                430
Leu Lys Arg Met Val Val Tyr Gln Asp Ser Ile Gln Asp Lys Ile Ser
                435                440                445
Gly Asn Met Arg Lys Ala Leu Thr Pro Thr Leu Cys Ser Pro Gln Ser
                450                455                460
Arg Ser Trp Gly Arg Met Ser Gly Ser Tyr Ala Ser Arg Arg Arg Asp
465                470                475                480
Pro

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<210> 560
<211> 2409
<212> DNA
<213> Homo Sapiens

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<400> 560
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<210> 561

<211> 521

<212> PRT

<213> Homo Sapiens

<400> 561

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20      25      30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
35      40      45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
50      55      60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65      70      75      80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
85      90      95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
100      105      110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
115      120      125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
130      135      140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145      150      155      160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
165      170      175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
180      185      190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
195      200      205

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Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
 210 215 220
 Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
 225 230 235 240
 Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
 245 250 255
 Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
 260 265 270
 Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
 275 280 285
 Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
 290 295 300
 Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
 305 310 315 320
 Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
 325 330 335
 Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
 340 345 350
 Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
 355 360 365
 Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
 370 375 380
 Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
 385 390 395 400
 Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
 405 410 415
 Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Thr Phe Cys Pro
 420 425 430
 Ser Pro Gln Pro Pro Arg Gly Pro Gly Val Ser Thr Ile Ser Lys Pro
 435 440 445
 Val Met Val His Gln Glu Pro Asn Phe Ile Tyr Arg Pro Ala Val Lys
 450 455 460
 Ser Glu Val Leu Pro Gln Glu Met Leu Lys Arg Met Val Val Tyr Gln
 465 470 475 480
 Asp Ser Ile Gln Asp Lys Ile Ser Gly Asn Met Arg Lys Ala Leu Thr
 485 490 495
 Pro Thr Leu Cys Ser Pro Gln Ser Arg Ser Trp Gly Arg Met Ser Gly
 500 505 510
 Ser Tyr Ala Ser Arg Arg Arg Asp Pro
 515 520

<210> 562

<211> 1445

<212> DNA

<213> Homo Sapiens

<400> 562

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caggaatttc aagtatgtgc ccgggtntgt caggtcccag ttgcctttnt gacggccccc     1320
ctcagaggga cggcgatgag cactaaatgc ttttttgant attttctat agattttttt     1380
taaaactttt ttttctctct gttccaattg atagctttct tatttaataa attctgtagt     1440
tcacc                                           1445

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<210> 563

<211> 192

<212> PRT

<213> Homo Sapiens

<400> 563

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Pro Ala Gly Ser Pro Ser Ala Asp Phe Ala Val His Gly Glu Ser Leu
 1           5           10          15
Gly Asp Arg His Leu Arg Thr Leu Gln Ile Ser Tyr Asp Ala Leu Lys
          20          25          30
Asp Glu Asn Ser Lys Leu Arg Arg Lys Leu Asn Glu Val Gln Ser Phe
          35          40          45
Ser Glu Ala Gln Thr Glu Met Val Arg Thr Leu Glu Arg Lys Leu Glu
          50          55          60
Ala Lys Met Ile Lys Glu Glu Ser Asp Tyr His Asp Leu Glu Ser Val
          65          70          75          80
Val Gln Gln Val Glu Gln Asn Leu Glu Leu Met Thr Lys Arg Ala Val
          85          90          95
Lys Ala Glu Asn His Val Val Lys Leu Lys Gln Glu Ile Ser Leu Leu
          100         105         110
Gln Ala Gln Val Ser Asn Phe Gln Arg Glu Asn Glu Ala Leu Arg Cys
          115         120         125
Gly Gln Gly Ala Ser Leu Thr Val Val Lys Gln Asn Ala Asp Val Ala
          130         135         140
Leu Gln Asn Leu Arg Val Val Met Asn Ser Ala Gln Ala Ser Ile Lys
          145         150         155         160
Gln Leu Val Ser Gly Ala Glu Thr Leu Asn Leu Val Ala Glu Ile Leu
          165         170         175
Lys Ser Ile Asp Arg Ile Ser Glu Val Lys Asp Glu Glu Glu Asp Ser
          180         185         190

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<210> 564

<211> 1226

<212> DNA

<213> Homo Sapiens

<400> 564

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ctggggccgcg aggcgcggag cttgggagcg gagcccaggc cgtgccgcgc ggcgccatga      60
agggcaagga ggagaaggag ggcggcgcac ggctgggcgc tggcggcgga agccccgaga      120
agagcccagag cgcgcaggag ctcaaggagc agggcaatcg tctgttcgtg ggccgaaagt      180
acccgagggc ggcggcctgc tacggccgcg cgatcacccg gaaccgcgtg gtggccgtgt      240
attacaccaa ccgggccttg tgctacctga agatgcagca gcacgagcag gccctggccg      300
actgccggcg cgccctggag ctggacgggc agtctgtgaa ggcgcacttc ttcctggggc      360
agtgccagct ggagatggag agctatgatg aggccatcgc caatctgcag cgagcttaca      420
gcctggccaa ggagcagcgg ctgaacttcg gggacgacat cccagcgcct cttcgaatcg      480
cgaagaagaa gcgctggaac agcattgagg agcggcgcac ccaccaggag agcgagctgc      540
actcctacct ctccaggctc attgccgcgg agcgtgagag ggagctggaa gagtgccagc      600
gaaaccacga ggggtgatgag gacgacagcc acgtccgggc ccagcaggcc tgcattgagg      660
ccaagcacga caagtacatg gcggacatgg acgagctttt ttctcaggtg gatgagaaga      720
ggaagaagcg agacatcccc gactacctgt gtggcaagat cagcttttgag ctgatgcggg      780
agccgtgcat cagccccagt ggcattcacct acgaccgcaa ggacatcgag gagcacctgc      840
agcgtgtggg tcattttgac ccggtgaccg ggagccccct gaccaggaa cagttcatcc      900
ccaacttggc tatgaaggag gttattgacg cattcatctc tgagaatggc tgggtggagg      960
actactgagg ttccctgccc tacctggcgt cctggtccag gggagccctg ggcagaagcc     1020
cccgccccct aaacatagtt tatgtttttg gccaccccg cagcttcccc caagttctgc     1080
tgttggactc tggactgttt cccctctcag catcgctttt gctgggccgt gattgtcccc     1140
tttgtgggct ggaaaagcag gtgaggggtg gctgggctga ggccattgcc gccactatct     1200
gtgtaataaa atccgtgagc acgaaa

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<210> 565

<211> 303

<212> PRT

<213> Homo Sapiens

<400> 565

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Met Lys Gly Lys Glu Glu Lys Glu Gly Gly Ala Arg Leu Gly Ala Gly
  1              5              10              15
Gly Gly Ser Pro Glu Lys Ser Pro Ser Ala Gln Glu Leu Lys Glu Gln
              20              25              30
Gly Asn Arg Leu Phe Val Gly Arg Lys Tyr Pro Glu Ala Ala Ala Cys
              35              40              45
Tyr Gly Arg Ala Ile Thr Arg Asn Pro Leu Val Ala Val Tyr Tyr Thr
              50              55              60
Asn Arg Ala Leu Cys Tyr Leu Lys Met Gln Gln His Glu Gln Ala Leu
              65              70              75              80
Ala Asp Cys Arg Arg Ala Leu Glu Leu Asp Gly Gln Ser Val Lys Ala
              85              90              95
His Phe Phe Leu Gly Gln Cys Gln Leu Glu Met Glu Ser Tyr Asp Glu
              100              105              110
Ala Ile Ala Asn Leu Gln Arg Ala Tyr Ser Leu Ala Lys Glu Gln Arg
              115              120              125
Leu Asn Phe Gly Asp Asp Ile Pro Ser Ala Leu Arg Ile Ala Lys Lys
              130              135              140
Lys Arg Trp Asn Ser Ile Glu Glu Arg Arg Ile His Gln Glu Ser Glu
              145              150              155              160
Leu His Ser Tyr Leu Ser Arg Leu Ile Ala Ala Glu Arg Glu Arg Glu
              165              170              175
Leu Glu Glu Cys Gln Arg Asn His Glu Gly Asp Glu Asp Asp Ser His
              180              185              190
Val Arg Ala Gln Gln Ala Cys Ile Glu Ala Lys His Asp Lys Tyr Met
              195              200              205
Ala Asp Met Asp Glu Leu Phe Ser Gln Val Asp Glu Lys Arg Lys Lys

```

210	215	220
Arg Asp Ile Pro Asp Tyr Leu Cys Gly Lys Ile Ser Phe Glu Leu Met		
225	230	235
Arg Glu Pro Cys Ile Thr Pro Ser Gly Ile Thr Tyr Asp Arg Lys Asp		240
	245	250
Ile Glu Glu His Leu Gln Arg Val Gly His Phe Asp Pro Val Thr Gly		255
	260	265
Ser Pro Leu Thr Gln Glu Gln Phe Ile Pro Asn Leu Ala Met Lys Glu		270
	275	280
Val Ile Asp Ala Phe Ile Ser Glu Asn Gly Trp Val Glu Asp Tyr		285
	290	295
		300

<210> 566
 <211> 1857
 <212> DNA
 <213> Homo Sapiens

<400> 566

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aactgaagct ttcctgcacc actggactta aggaanagtg tactcgtagg cggacagctt	120
tagtggcggg ccggccgctc tcattccccg taaggagcag agtcctttgt actgaccaag	180
atgagcaaca tctacatcca ggagcctccc acgaatggga aggttttatt gaaaactaca	240
gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagcttg cagaaatttt	300
atcccaactt tgtttggaag cttattatga caataccatt tttcatagag ttgtgcctgg	360
tttcatagtc caaggcggag atcctactgg cacagggagt ggtggagagt ctatctatgg	420
agcgccattc aaagatgaat ttcattcacg gttgcgtttt aatcggagag gactggttgc	480
catggcaaat gctggttctc atgataatgg caccactttt ttcttcacac tgggtcgagc	540
agatgaactt aacaataagc ataccatctt tggaaagggt acaggggata cagtatataa	600
catgttgcca ctgtcagaag tagacattga tgatgacgaa agaccacata atccacacaa	660
aataaaaagc tgtgaggttt tgtttaatcc ttttgatgac atcattccaa gggaaattaa	720
aaggctgaaa aaagagaaac cagaggagga agtaaaagaa ttgaaacca aaggcacaaa	780
aaatttttagt ttactttcat ttggagagga agctgaggaa gaagaagagg aagtaaatac	840
agttagtcag agcatgaagg gcaaaagcaa aagtagtcag gacttgctta aggatgatcc	900
acatctcagt tctgttccag ttgtagaaag tgaaaaagggt gatgcaccag atttagttga	960
tgatggagaa gatgaaagtg cagagcatga tgaatatatt gatggtgatg aaaagaacct	1020
gatgagagaa agaattgcca aaaaattaaa aaaggacaca agtgcgaaatg ttaaatcagc	1080
tggagaagga gaagtggaga agaaatcagt cagccgcagt gaagagctca gaaaagaagc	1140
aagacaatta aaacgggaac tcttagcagc aaaacaaaaa aaagtagaaa atgcagcaaa	1200
acaagcagaa aaaagaagtg aagaggaaga agccccctca gatggtgctg ttgccgaata	1260
cagaagagaa aagcaaaagt atgaagcttt gaggaagcaa cagtcaaaga agggaaacttc	1320
ccgggaagat cagacccttg cactgctgaa ccagttttaa tctaaactca ctcaagcaat	1380
tgctgaaaca cctgaaaatg acattcctga aacagaagta gaagatgatg aaggatggat	1440
gtcacatgta cttcagtttg aggataaaag cagaaaagtg aaagatgcaa gcatgcaaga	1500
ctcagataca tttgaaatct atgatcctcg gaatccagtg aataaaaagaa ggagggaaga	1560
aagcaaaaag ctgatgagag agaaaaaaga aagaagataa aatgagaata atgataacca	1620
gaacttgctg gaaatgtgcc tacaatggcc ttgtaacagc cattgttccc aacagcatca	1680
cttaggggtg tgaagaagaa tatttttgaa cctgttgtct ggttttgaaa aacaattatc	1740
ttgttttgca aattgtggaa tgatgtaagc aaatgctttt ggttactggt acatgtgttt	1800
tttcttagct gaccttttat attgctaata ctgaaataaa ataactttcc ttccaaa	1857

<210> 567
 <211> 372
 <212> PRT
 <213> Homo Sapiens

<400> 567

Met Ala Asn Ala Gly Ser His Asp Asn Gly Thr His Phe Phe Phe Thr
 1 5 10 15
 Leu Gly Arg Ala Asp Glu Leu Asn Asn Lys His Thr Ile Phe Gly Lys
 20 25 30
 Val Thr Gly Asp Thr Val Tyr Asn Met Leu Arg Leu Ser Glu Val Asp
 35 40 45
 Ile Asp Asp Asp Glu Arg Pro His Asn Pro His Lys Ile Lys Ser Cys
 50 55 60
 Glu Val Leu Phe Asn Pro Phe Asp Asp Ile Ile Pro Arg Glu Ile Lys
 65 70 75 80
 Arg Leu Lys Lys Glu Lys Pro Glu Glu Glu Val Lys Lys Leu Lys Pro
 85 90 95
 Lys Gly Thr Lys Asn Phe Ser Leu Leu Ser Phe Gly Glu Glu Ala Glu
 100 105 110
 Glu Glu Glu Glu Glu Val Asn Arg Val Ser Gln Ser Met Lys Gly Lys
 115 120 125
 Ser Lys Ser Ser His Asp Leu Leu Lys Asp Asp Pro His Leu Ser Ser
 130 135 140
 Val Pro Val Val Glu Ser Glu Lys Gly Asp Ala Pro Asp Leu Val Asp
 145 150 155 160
 Asp Gly Glu Asp Glu Ser Ala Glu His Asp Glu Tyr Ile Asp Gly Asp
 165 170 175
 Glu Lys Asn Leu Met Arg Glu Arg Ile Ala Lys Lys Leu Lys Lys Asp
 180 185 190
 Thr Ser Ala Asn Val Lys Ser Ala Gly Glu Gly Glu Val Glu Lys Lys
 195 200 205
 Ser Val Ser Arg Ser Glu Glu Leu Arg Lys Glu Ala Arg Gln Leu Lys
 210 215 220
 Arg Glu Leu Leu Ala Ala Lys Gln Lys Lys Val Glu Asn Ala Ala Lys
 225 230 235 240
 Gln Ala Glu Lys Arg Ser Glu Glu Glu Glu Ala Pro Pro Asp Gly Ala
 245 250 255
 Val Ala Glu Tyr Arg Arg Glu Lys Gln Lys Tyr Glu Ala Leu Arg Lys
 260 265 270
 Gln Gln Ser Lys Lys Gly Thr Ser Arg Glu Asp Gln Thr Leu Ala Leu
 275 280 285
 Leu Asn Gln Phe Lys Ser Lys Leu Thr Gln Ala Ile Ala Glu Thr Pro
 290 295 300
 Glu Asn Asp Ile Pro Glu Thr Glu Val Glu Asp Asp Glu Gly Trp Met
 305 310 315 320
 Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp Ala
 325 330 335
 Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg Asn Pro
 340 345 350
 Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys Leu Met Arg Glu Lys
 355 360 365
 Lys Glu Arg Arg
 370

<210> 568

<211> 1537

<212> DNA

<213> Homo Sapiens

<400> 568

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gccgcgcgcc gatcggtcgt taccgcgagg cgctgggtggc cttcaggctg gacggcgcg 60
gtcagccctg gttcgccggc ttctgggtct ttgaacagcc gcgatgtcga tcttcacccc 120
caccaaccag atccgcctaa ccaatgtggc cgtgggtacgg atgaagcgtg ccgggaagcg 180
cttcgaaatc gcctgctaca aaaacaaggc gtttgtaaat gtttctaaag gtcagggttg 240
cctcgatgaa gttctgcaga ccactcagt gtttgtaaat gtttctaaag gtcagggttg 300
caaaaaggaa gatctcatca gtgcgttttg aacagatgac caaactgaaa tctgtaagca 360
gattttgact aaaggagaag ttcaagtatc agataaagaa agacacacac aactggagca 420
gatgttttagg gacattgcaa ctattgtggc agacaaatgt gtgaatcctg aaacaaagag 480
accatacacc gtgatcctta ttgagagagc catgaaggac atccactatt cggtgaaaac 540
caacaagagt acaaaacagc aggctttgga agtgataaag cagttaaaaag agaaaatgaa 600
gatagaacgt gctcacatga agcttcggtt catccttcca gtcaatgaag gcaagaactg 660
aaagaaaagc tcaagccact gatcaaggtc atagaaagtg aagattatgg ccaacagtta 720
gaaatcgtat gtctgattga cccgggctgc ttccgagaaa ttgatgagct aataaaaaag 780
gaaactaaag gcaaagggtt tttggaagta ctcaatctga aagatgtaga agaaggagat 840
gagaaatttg aatgacaccc atcaatctct tcacctctaa aacactaaaag tgtttccgtt 900
tccgacggca ctggtttcatg tctgtggtct gccaaatact tgcttaaaact atttgacatt 960
ttctatcttt gtgttaacag tggacacagc aaggctttcc tacataagta taataatgtg 1020
ggaatgattt gggttttaatt ataaactggg gtctaaatcc taaagcaaaa ttgaaactcc 1080
aagatgcaaa gtccagagtg gcattttgct actctgtctc atgctttagt agctttccaa 1140
aatgaaagtt acttgangca gctcttggtg gtgaaaagtt atttgtacag tagagtaaga 1200
ttattagggg tatgtctata caaaaaagg gggggtcttt ctaaaaaaag aaaacatatg 1260
atgcttcatt tctacttaat ggaacttggt ttctgagggt cattatggta tcgtaatgta 1320
aagcttggtt gatgttcctg attatttgag gaacagatat aggaaaattg tgccggaatt 1380
acctttcatt gaacatgctg ccataaatta ggttattttt ggttaaaaaa taaaagtcaa 1440
ttatttttaa tttttaaagt ttataatata tattaatata ggtaaaattg tatgtaatca 1500
ataaaaccaa ttttatgttt attaaactta aaaaaaa 1537

```

<210> 569

<211> 210

<212> PRT

<213> Homo Sapiens

<400> 569

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Ala Ala Arg Arg Ser Val Val Thr Ala Arg Arg Trp Trp Pro Ser Gly
1          5          10          15
Trp Thr Ala Arg Val Ser Pro Gly Ser Pro Ala Ser Gly Ser Leu Asn
20          25          30
Ser Arg Asp Val Asp Leu His Pro His Gln Pro Asp Pro Asn Gln
35          40          45
Cys Gly Arg Gly Thr Asp Glu Ala Cys Arg Glu Ala Leu Arg Asn Arg
50          55          60
Leu Leu Gln Lys Gln Val Val Gly Trp Arg Ser Gly Val Glu Lys Asp
65          70          75          80
Leu Asp Glu Val Leu Gln Thr His Ser Val Phe Val Asn Val Ser Lys
85          90          95
Gly Gln Val Ala Lys Lys Glu Asp Leu Ile Ser Ala Phe Gly Thr Asp
100         105         110
Asp Gln Thr Glu Ile Cys Lys Gln Ile Leu Thr Lys Gly Glu Val Gln
115         120         125
Val Ser Asp Lys Glu Arg His Thr Gln Leu Glu Gln Met Phe Arg Asp
130         135         140
Ile Ala Thr Ile Val Ala Asp Lys Cys Val Asn Pro Glu Thr Lys Arg
145         150         155         160
Pro Tyr Thr Val Ile Leu Ile Glu Arg Ala Met Lys Asp Ile His Tyr

```

165 170 175
 Ser Val Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile
 180 185 190
 Lys Gln Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Lys Leu
 195 200 205
 Arg Phe
 210

<210> 570
 <211> 1211
 <212> DNA
 <213> Homo Sapiens

<400> 570
 accatcttttg gaaagggttac aggggtatatac agtatataac atgttgcgac tgtcagaagt 60
 agacattgat gatgacgaaa gaccacataa tccacacaaa ataaaaagct gtgaggtttt 120
 gtttaatcct tttgatgaca tcattccaag ggaaattaaa aggctgaaaa aagagaaacc 180
 agaggaggaa gttaaagaaat tgaaacccaa aggcacaaaa aatttttagtt tactttcatt 240
 tggagaggaa gctgaggaag aagaggagga agtaaatcga gttagtcaga gcatgaaggg 300
 caaaagcaaa agtagtcatg acttgcttaa ggatgatcca catctcagtt ctgttccagt 360
 tgtagaaaagt gaaaaagggtg atgcagcaga tttagttgat gatggagaag atgaaagtgc 420
 agagcatgat gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa 480
 aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag aagtggagaa 540
 gaaatcagtc agcgcagtg aagagctcag aaaagaagca agacaattaa aacgggaact 600
 cttagcagca gaacaaaaaa aagtagaaaa tgcagcaaaa caagcagaaa aaagaagtga 660
 agaggaagaa gcccctccag atggtgctgt tgccgaatac agaagagaaa agcaaaaagta 720
 tgaagctctg aggaagcaac agtcaaagaa gggaacttcc cggaagatc agacccttgc 780
 actgctgaac cagttttaat ctaaactcac tcaagcaatt gctgaaacgc ctgaaaatga 840
 cattcctgaa acagaagtag aagatgatga aggatggatg tcacatgtac ttcagtttga 900
 ggataaaagc agaaaagtga aagatgcaag catgcaagac tcagatacat ttgaaatcta 960
 tgatcctcgg aatccagtga ataaaagaag gagggaagaa agcaaaaagc tgatgagaga 1020
 gaaaaaagaa agaagataaa atgagaataa tgataaccag aacttgctgg aaatgtgcct 1080
 acaatggcct tgtaacagcc attgttccca acagcatcac ttaggggtgt gaaaagaagt 1140
 atttttgaac ctgttgtctg gttttgaaaa acaattatct tgttttgcaa attgtggaat 1200
 gatgtaagca a 1211

<210> 571
 <211> 354
 <212> PRT
 <213> Homo Sapiens

<400> 571
 Pro Ser Leu Glu Arg Leu Gln Gly Tyr Thr Val Tyr Asn Met Leu Arg
 1 5 10 15
 Leu Ser Glu Val Asp Ile Asp Asp Asp Glu Arg Pro His Asn Pro His
 20 25 30
 Lys Ile Lys Ser Cys Glu Val Leu Phe Asn Pro Phe Asp Asp Ile Ile
 35 40 45
 Pro Arg Glu Ile Lys Arg Leu Lys Lys Glu Lys Pro Glu Glu Glu Val
 50 55 60
 Lys Lys Leu Lys Pro Lys Gly Thr Lys Asn Phe Ser Leu Leu Ser Phe
 65 70 75 80
 Gly Glu Glu Ala Glu Glu Glu Glu Glu Glu Val Asn Arg Val Ser Gln
 85 90 95
 Ser Met Lys Gly Lys Ser Lys Ser Ser His Asp Leu Leu Lys Asp Asp

100 105 110
 Pro His Leu Ser Ser Val Pro Val Val Glu Ser Glu Lys Gly Asp Ala
 115 120 125
 Ala Asp Leu Val Asp Asp Gly Glu Asp Glu Ser Ala Glu His Asp Glu
 130 135 140
 Tyr Ile Asp Gly Asp Glu Lys Asn Leu Met Arg Glu Arg Ile Ala Lys
 145 150 155 160
 Lys Leu Lys Lys Asp Thr Ser Ala Asn Val Lys Ser Ala Gly Glu Gly
 165 170 175
 Glu Val Glu Lys Lys Ser Val Ser Arg Ser Glu Glu Leu Arg Lys Glu
 180 185 190
 Ala Arg Gln Leu Lys Arg Glu Leu Leu Ala Ala Glu Gln Lys Lys Val
 195 200 205
 Glu Asn Ala Ala Lys Gln Ala Glu Lys Arg Ser Glu Glu Glu Glu Ala
 210 215 220
 Pro Pro Asp Gly Ala Val Ala Glu Tyr Arg Arg Glu Lys Gln Lys Tyr
 225 230 235 240
 Glu Ala Leu Arg Lys Gln Gln Ser Lys Lys Gly Thr Ser Arg Glu Asp
 245 250 255
 Gln Thr Leu Ala Leu Leu Asn Gln Phe Lys Ser Lys Leu Thr Gln Ala
 260 265 270
 Ile Ala Glu Thr Pro Glu Asn Asp Ile Pro Glu Thr Glu Val Glu Asp
 275 280 285
 Asp Glu Gly Trp Met Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg
 290 295 300
 Lys Val Lys Asp Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr
 305 310 315 320
 Asp Pro Arg Asn Pro Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys
 325 330 335
 Leu Met Arg Glu Lys Lys Glu Arg Arg Ile Leu Pro Val Asn Glu Gly
 340 345 350
 Lys Asn

<210> 572
 <211> 604
 <212> DNA
 <213> Homo Sapiens

<400> 572
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 tcccttttagc aacagggccc ccaagaagct cccgttcatt cacccttacc ttggccccc 120
 gggttgaccc ccaaaggctc ccttacccca aagtgggttg ttgaataaat cttctcagtt 180
 ccctggctcc caaggcccat tgaagaagat tgtacaaggc gtgcctcaag taccctgagt 240
 ggaaacagaa gcacctgcct cacttcaagc cgtggctgca cccggagcag agcccgttgc 300
 cgagcctggc gctgtcggag ctgtcgggtgc agcatgcgga ctactggag aacatcgacg 360
 agagcgcggt ggccgagagc agagaggagc ggatgggcgg cgcgggcggc gagggcagcg 420
 acgacgacac cttcacctga gcccgacccg cttcagggac ggagacagga ccgggcgagc 480
 cctggggcgg cggccgctcc tgcactttct cccctcccc acccggcacc tgggtggcacc 540
 gggccaggcc caggcgggtg ctgcagcctg gctggacaga gcccaataaa cggtatccac 600
 agcc 604

<210> 573
 <211> 195
 <212> PRT

<213> Homo Sapiens

<400> 573

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Leu Arg Gln Lys Ile Leu Val Pro Thr Phe Cys Ser Ile Pro Lys Gly
 1           5           10           15
Leu Thr Phe Ile Pro Phe Ser Asn Arg Ala Pro Lys Lys Leu Pro Phe
          20           25           30
Ile His Pro Tyr Leu Gly Pro Gln Val Gly Pro Pro Lys Ala Pro Leu
          35           40           45
Pro Gln Ser Gly Trp Leu Asn Lys Ser Ser Gln Phe Pro Gly Ser Gln
          50           55           60
Gly Pro Leu Lys Lys Ile Val Gln Gly Val Pro Gln Val Pro Arg Val
65           70           75           80
Glu Thr Glu Ala Pro Ala Ser Leu Gln Ala Val Ala Ala Pro Gly Ala
          85           90           95
Glu Pro Val Ala Glu Pro Gly Ala Val Gly Ala Val Gly Ala Ala Cys
          100          105          110
Gly Leu Thr Gly Glu His Arg Arg Glu Arg Gly Gly Arg Glu Gln Arg
          115          120          125
Gly Ala Asp Gly Arg Arg Gly Arg Arg Gly Gln Arg Arg Arg His Leu
          130          135          140
His Leu Ser Pro His Arg Phe Arg Asp Gly Asp Arg Thr Gly Arg Ala
          145          150          155          160
Leu Gly Arg Arg Pro Leu Leu His Phe Leu Pro Ser Pro Thr Arg His
          165          170          175
Leu Val Ala Pro Gly Gln Ala Gln Ala Gly Ala Ala Ala Trp Leu Asp
          180          185          190
Arg Ala Gln
          195

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<210> 574

<211> 742

<212> DNA

<213> Homo Sapiens

<400> 574

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cccaccaggg cccctcgat gcagagacag aggtcggtgc tgaccgctgc acgtcgactg      60
cctaccagga gcagaggccc caggtggagc aagttggcaa agtcgctcct ctctcccag      120
ggctgccggc aatggggggg cctggccccg gcccctgtga ggaccccgcg ggtgctgggg      180
gagcaggtgc agggggctcc gagccctgg tgactgtcac cgtgcagtgc gccttcacag      240
tggccctgag ggcaggaaga ggagccgacc tgtccagcct gcgggcaact ctgggccaag      300
ccttccttca ccaggcccag cttgggcaat tcagttacct agccccaggt gaggacgggc      360
actgggtccc catccccgag gaggagtgc tgcagagggc ctggcaggac gcagctgcct      420
gccccagggg gctgcagctg cagtgcaggg gagccggggg tcggccgggc ctttaccagg      480
tggtggccca gcacagatac tccgcccagg ggccagagga cctgggcttc cgacaggggg      540
acacggtgga cgtcctgtgt gaagtggacc aggcattggc ggagggccac tgtgacggcc      600
gcatcggcat ctcccccaag tcttcgtgg tccccgccg ccctcggtat tcaggagccc      660
ccggccgcct gcccgatcc cagcaggagg atcagcccta atgatgctgt gtccatgatg      720
cttttaataa aaacaacccc ca                                742

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<210> 575

<211> 232

<212> PRT

<213> Homo Sapiens

<400> 575

His	Gln	Gly	Pro	Leu	Asp	Ala	Glu	Thr	Glu	Val	Gly	Ala	Asp	Arg	Cys
1				5					10					15	
Thr	Ser	Thr	Ala	Tyr	Gln	Glu	Gln	Arg	Pro	Gln	Val	Glu	Gln	Val	Gly
			20					25						30	
Lys	Val	Ala	Pro	Leu	Ser	Pro	Gly	Leu	Pro	Ala	Met	Gly	Gly	Pro	Gly
		35					40					45			
Pro	Gly	Pro	Cys	Glu	Asp	Pro	Ala	Gly	Ala	Gly	Gly	Ala	Gly	Ala	Gly
	50					55					60				
Gly	Ser	Glu	Pro	Leu	Val	Thr	Val	Thr	Val	Gln	Cys	Ala	Phe	Thr	Val
65					70					75					80
Ala	Leu	Arg	Ala	Gly	Arg	Gly	Ala	Asp	Leu	Ser	Ser	Leu	Arg	Ala	Leu
				85				90						95	
Leu	Gly	Gln	Ala	Phe	Leu	His	Gln	Ala	Gln	Leu	Gly	Gln	Phe	Ser	Tyr
			100					105						110	
Leu	Ala	Pro	Gly	Glu	Asp	Gly	His	Trp	Val	Pro	Ile	Pro	Glu	Glu	Glu
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	130					135					140				
Gln	Leu	Gln	Cys	Arg	Gly	Ala	Gly	Gly	Arg	Pro	Val	Leu	Tyr	Gln	Val
145					150					155					160
Val	Ala	Gln	His	Arg	Tyr	Ser	Ala	Gln	Gly	Pro	Glu	Asp	Leu	Gly	Phe
				165				170						175	
Arg	Gln	Gly	Asp	Thr	Val	Asp	Val	Leu	Cys	Glu	Val	Asp	Gln	Ala	Trp
			180					185					190		
Leu	Glu	Gly	His	Cys	Asp	Gly	Arg	Ile	Gly	Ile	Phe	Pro	Lys	Cys	Phe
		195					200					205			
Val	Val	Pro	Ala	Gly	Pro	Arg	Met	Ser	Gly	Ala	Pro	Gly	Arg	Leu	Pro
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225						230									

<210> 576
 <211> 1087
 <212> DNA
 <213> Homo Sapiens

<400> 576

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agctctgcgc	caatcacagg	gcaagtctcc	gctgctgtgg	aaaagaaccc	tgctgtttgg	420
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<210> 577
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<212> PRT
<213> Homo Sapiens

<400> 577
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Pro Ile Arg Gln Thr Ala Ser Ile Phe Lys Gln Pro Val Thr Lys Val
35 40 45
Thr Asn His Pro Ser Asn Lys Val Lys Ser Asp Pro Gln Arg Met Asn
50 55 60
Glu Gln Pro Arg Gln Leu Phe Trp Glu Lys Arg Leu Gln Gly Leu Ser
65 70 75 80
Ala Ser Asp Val Thr Glu Gln Ile Ile Lys Thr Met Glu Leu Pro Lys
85 90 95
Gly Leu Gln Gly Val Gly Pro Gly Ser Asn Asp Glu Thr Leu Leu Ser
100 105 110
Ala Val Ala Ser Ala Leu His Thr Ser Ser Ala Pro Ile Thr Gly Gln
115 120 125
Val Ser Ala Ala Val Glu Lys Asn Pro Ala Val Trp Leu Asn Thr Ser
130 135 140
Gln Pro Leu Cys Lys Ala Phe Ile Val Thr Asp Glu Asp Ile Arg Lys
145 150 155 160
Gln Glu Glu Arg Val Gln Gln Val Arg Lys Lys Leu Glu Glu Ala Leu
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Glu Met Asp Ser Gly Asp Glu Ala
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<210> 578
<211> 2569
<212> DNA
<213> Homo Sapiens

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tgtttctcat ataaatgacc ttccagactt ttatgttcaa ctaatagaag atgaagctga 180
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tccacctttg caaagaggag atatgatatg tgctgttttc ccagaagata atttatggta 300
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agatgatatg attagcaggt atgctctcag tgaaaaatct caagtagaac tttctaccca 660
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tcttaactgg tataatccag aaaaaaaaaat gataagaggt tatgcccactg tgatagatgg 780

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<210> 579

<211> 752

<212> PRT

<213> Homo Sapiens

<400> 579

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Pro Gly Phe Lys Thr Thr Val Tyr Val Ser His Ile Asn Asp Leu Ser
      35           40           45
Asp Phe Tyr Val Gln Leu Ile Glu Asp Glu Ala Glu Ile Ser His Leu
      50           55           60
Ser Glu Arg Leu Asn Ser Val Lys Thr Arg Pro Glu Tyr Tyr Val Gly
      65           70           75           80
Pro Pro Leu Gln Arg Gly Asp Met Ile Cys Ala Val Phe Pro Glu Asp
      85           90           95
Asn Leu Trp Tyr Arg Ala Val Ile Lys Glu Gln Gln Pro Asn Asp Leu
      100          105          110
Leu Ser Val Gln Phe Ile Asp Tyr Gly Asn Val Ser Val Val His Thr
      115          120          125
Asn Lys Ile Gly Arg Leu Asp Leu Val Asn Ala Ile Leu Pro Gly Leu
      130          135          140

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 Ile Arg Cys Glu Phe Val Lys Phe Gln Asp Arg Trp Glu Val Ile Leu
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 Ala Asp Glu His Gly Ile Ile Ala Asp Asp Met Ile Ser Arg Tyr Ala
 195 200 205
 Leu Ser Glu Lys Ser Gln Val Glu Leu Ser Thr Gln Val Ile Lys Ser
 210 215 220
 Ala Ser Ser Lys Ser Val Asn Lys Ser Asp Ile Asp Thr Ser Val Phe
 225 230 235 240
 Leu Asn Trp Tyr Asn Pro Glu Lys Lys Met Ile Arg Ala Tyr Ala Thr
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 Val Ile Asp Gly Pro Glu Tyr Phe Trp Cys Gln Phe Ala Asp Thr Glu
 260 265 270
 Lys Leu Gln Cys Leu Glu Val Glu Val Gln Thr Ala Gly Glu Gln Val
 275 280 285
 Ala Asp Arg Arg Asn Cys Ile Pro Cys Pro Tyr Ile Gly Asp Pro Cys
 290 295 300
 Ile Val Arg Tyr Arg Glu Asp Gly His Tyr Tyr Arg Ala Leu Ile Thr
 305 310 315 320
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 325 330 335
 Asn Ile Glu Asp Cys Val Asp Pro Lys Ala Leu Trp Ala Ile Pro Ser
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 Glu Leu Leu Ser Val Pro Met Gln Ala Phe Pro Cys Cys Leu Ser Gly
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 Phe Asn Ile Ser Glu Gly Leu Cys Ser Gln Glu Gly Asn Asp Tyr Phe
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 Tyr Glu Ile Ile Thr Glu Asp Val Leu Glu Ile Thr Ile Leu Glu Ile
 385 390 395 400
 Arg Arg Asp Val Cys Asp Ile Pro Leu Ala Ile Val Asp Leu Lys Ser
 405 410 415
 Lys Gly Lys Ser Ile Asn Glu Lys Met Glu Lys Tyr Ser Lys Thr Gly
 420 425 430
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 435 440 445
 Thr Leu Gly Ser Tyr Asn Leu Asp Val Gly Leu Lys Lys Leu Ser Asn
 450 455 460
 Lys Ala Val Gln Asn Lys Ile Tyr Met Glu Gln Gln Thr Asp Glu Leu
 465 470 475 480
 Ala Glu Ile Thr Glu Lys Asp Val Asn Ile Ile Gly Thr Lys Pro Ser
 485 490 495
 Asn Phe Arg Asp Pro Lys Thr Asp Asn Ile Cys Glu Gly Phe Glu Asn
 500 505 510
 Pro Cys Lys Asp Lys Ile Asp Thr Glu Glu Leu Glu Gly Glu Leu Glu
 515 520 525
 Cys His Leu Val Asp Lys Ala Glu Phe Asp Asp Lys Tyr Leu Ile Thr
 530 535 540
 Gly Phe Asn Thr Leu Leu Pro His Ala Asn Glu Thr Lys Glu Ile Leu
 545 550 555 560
 Glu Leu Asn Ser Leu Glu Val Pro Leu Ser Pro Asp Asp Glu Ser Lys
 565 570 575
 Glu Phe Leu Glu Leu Glu Ser Ile Glu Leu Gln Asn Ser Leu Val Val

580					585					590						
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595					600					605						
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610					615					620						
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625					630					635					640	
Thr	Ala	Gln	Leu	Pro	Leu	Asp	Asp	Lys	Met	Asp	Pro	Leu	Ser	Leu	Gly	
645					650					655						
Val	Ser	Gln	Lys	Ala	Gln	Glu	Ser	Met	Cys	Thr	Glu	Asp	Met	Arg	Lys	
660					665					670						
Ser	Ser	Cys	Val	Glu	Ser	Phe	Asp	Asp	Gln	Arg	Arg	Met	Ser	Leu	His	
675					680					685						
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Cys	Glu	Glu	Glu	Phe	Val	Glu	Tyr	Lys	Asn	Arg	Asp	Ala	Ile	Ser	Ala	
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Leu	Met	Pro	Phe	Ser	Leu	Arg	Lys	Lys	Ala	Val	Met	Glu	Ala	Ser	Thr	
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<210> 580
 <211> 2077
 <212> DNA
 <213> Homo Sapiens

<400> 580

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<210> 581

<211> 312

<212> PRT

<213> Homo Sapiens

<400> 581

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Ser Asn Ser Ser Asp Ser Lys Ser Gln Ser Arg Arg His Leu Ser Ala
 35          40          45
Lys Glu Arg Arg Glu Met Lys Lys Lys Lys Leu Pro Ser Asp Ser Gly
 50          55          60
Asp Leu Glu Ala Leu Glu Gly Lys Asp Lys Glu Lys Glu Ser Thr Val
 65          70          75          80
His Ile Glu Thr His Gln Asn Thr Ser Lys Asn Val Ala Ala Val Gln
 85          90          95
Pro Met Lys Arg Gly Gln Lys Ser Lys Met Lys Lys Met Lys Glu Lys
100          105          110
Tyr Lys Asp Gln Asp Glu Glu Asp Arg Glu Leu Ile Met Lys Leu Leu
115          120          125
Gly Ser Ala Gly Ser Asn Lys Glu Glu Lys Gly Lys Lys Gly Lys Lys
130          135          140
Gly Lys Thr Lys Asp Glu Pro Val Lys Lys Gln Pro Gln Lys Pro Arg
145          150          155          160
Gly Gly Gln Arg Val Ser Asp Asn Ile Lys Lys Glu Thr Pro Phe Leu
165          170          175
Glu Val Ile Thr His Glu Leu Gln Asp Phe Ala Val Asp Asp Pro His
180          185          190
Asp Asp Lys Glu Glu Gln Asp Leu Asp Gln Gln Gly Asn Glu Glu Asn
195          200          205
Leu Phe Asp Ser Leu Thr Gly Gln Pro His Pro Glu Asp Val Leu Leu
210          215          220
Phe Ala Ile Pro Ile Cys Ala Pro Tyr Thr Thr Met Thr Asn Tyr Lys
225          230          235          240
Tyr Lys Val Lys Leu Thr Pro Gly Val Gln Lys Lys Gly Lys Ala Ala
245          250          255
Lys Thr Ala Leu Asn Ser Phe Met His Ser Lys Glu Ala Thr Ala Arg
260          265          270
Glu Lys Asp Leu Phe Arg Ser Val Lys Asp Thr Asp Leu Ser Arg Asn
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<210> 582
 <211> 3309
 <212> DNA
 <213> Homo Sapiens

<400> 582

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<210> 583

<211> 872

<212> PRT

<213> Homo Sapiens

<400> 583

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20          25          30
Arg Ala Gly Gly Ile Glu Thr Ile Ala Asn Glu Phe Ser Asp Arg Cys
35          40          45
Thr Pro Ser Val Ile Ser Phe Gly Ser Lys Asn Arg Thr Ile Gly Val
50          55          60
Ala Ala Lys Asn Gln Gln Ile Thr His Ala Asn Asn Thr Val Ser Asn
65          70          75          80
Phe Lys Arg Phe His Gly Arg Ala Phe Asn Asp Pro Phe Ile Gln Lys
85          90          95
Glu Lys Glu Asn Leu Ser Tyr Asp Leu Val Pro Leu Lys Asn Gly Gly
100         105         110
Val Gly Ile Lys Val Met Tyr Met Gly Glu Glu His Leu Phe Ser Val
115         120         125
Glu Gln Ile Thr Ala Met Leu Leu Thr Lys Leu Lys Glu Thr Ala Glu
130         135         140
Asn Ser Leu Lys Lys Pro Val Thr Asp Cys Val Ile Ser Val Pro Ser
145         150         155         160
Phe Phe Thr Asp Ala Glu Arg Arg Ser Val Leu Asp Ala Ala Gln Ile
165         170         175
Val Gly Leu Asn Cys Leu Arg Leu Met Asn Asp Met Thr Ala Val Ala
180         185         190
Leu Asn Tyr Gly Ile Tyr Lys Gln Asp Leu Pro Ser Leu Asp Glu Lys
195         200         205
Pro Arg Ile Val Val Phe Val Asp Met Gly His Ser Ala Phe Gln Val
210         215         220
Ser Ala Cys Ala Phe Asn Lys Gly Lys Leu Lys Val Leu Gly Thr Ala
225         230         235         240
Phe Asp Pro Phe Leu Gly Gly Lys Asn Phe Asp Glu Lys Leu Val Glu
245         250         255
His Phe Cys Ala Glu Phe Lys Thr Lys Tyr Lys Leu Asp Ala Lys Ser
260         265         270
Lys Ile Arg Ala Leu Leu Arg Leu Tyr Gln Glu Cys Glu Lys Leu Lys
275         280         285
Lys Leu Met Ser Ser Asn Ser Thr Asp Leu Pro Leu Asn Ile Glu Cys
290         295         300
Phe Met Asn Asp Lys Asp Val Ser Gly Lys Met Asn Arg Ser Gln Phe
305         310         315         320
Glu Glu Leu Cys Ala Glu Leu Leu Gln Lys Ile Glu Val Pro Leu Tyr

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-312-

Val Asn Glu Val Met Glu Trp Met Asn Asn Val Met Asn Ala Gln Ala
 770 775 780
 Lys Lys Ser Leu Asp Gln Asp Pro Val Val Arg Ala Gln Glu Ile Lys
 785 790 795 800
 Thr Lys Ile Lys Glu Leu Asn Asn Thr Cys Glu Pro Val Val Thr Gln
 805 810 815
 Pro Lys Pro Lys Ile Glu Ser Pro Lys Leu Glu Arg Thr Pro Asn Gly
 820 825 830
 Pro Asn Ile Asp Lys Lys Glu Glu Asp Leu Glu Asp Lys Asn Asn Phe
 835 840 845
 Gly Ala Glu Pro Pro His Gln Asn Gly Glu Cys Tyr Pro Asn Glu Lys
 850 855 860
 Asn Ser Val Asn Met Asp Leu Asp
 865 870

<210> 584
 <211> 2918
 <212> DNA
 <213> Homo Sapiens

<400> 584
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 cccaataacc gctatggcta ccagaatggc gccagctaca cctggcagtt tgaggcccg 480
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 cccaccaccc acacgcggct gccggcctcc agcatcaaaa agcagcccga ctctcccgcg 720
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<210> 585

<211> 687

<212> PRT

<213> Homo Sapiens

<400> 585

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Ala Asn Pro Tyr Val Thr Pro Asn Asn Arg Tyr Gly Tyr Gln Asn Gly
20          25          30
Ala Ser Tyr Thr Trp Gln Phe Glu Ala Arg Lys Ala Gln Ile Leu Lys
35          40          45
Cys Met Glu Cys Gly Ser Ser His Asp Thr Leu Gln Gln Leu Thr Ala
50          55          60
His Met Met Val Thr Gly His Phe Leu Lys Val Thr Thr Ser Ala Ser
65          70          75          80
Lys Lys Gly Lys Gln Leu Val Leu Asp Pro Val Val Glu Glu Lys Ile
85          90          95
Gln Ser Ile Pro Leu Pro Pro Thr Thr His Thr Arg Leu Pro Ala Ser
100         105         110
Ser Ile Lys Lys Gln Pro Asp Ser Pro Ala Gly Ser Thr Thr Ser Glu
115         120         125
Glu Lys Lys Glu Pro Glu Lys Glu Lys Pro Pro Val Ala Gly Asp Ala
130         135         140
Glu Lys Ile Lys Glu Glu Ser Glu Asp Ser Leu Glu Lys Phe Glu Pro
145         150         155         160
Ser Thr Leu Tyr Pro Tyr Leu Arg Glu Glu Asp Leu Asp Asp Ser Pro
165         170         175
Lys Gly Gly Leu Asp Ile Leu Lys Ser Leu Glu Asn Thr Val Ser Thr
180         185         190
Ala Ile Ser Lys Ala Gln Asn Gly Ala Pro Ser Trp Gly Gly Tyr Pro
195         200         205
Ser Ile His Ala Ala Tyr Gln Leu Pro Gly Thr Val Lys Pro Leu Pro
210         215         220
Ala Ala Val Gln Ser Val Gln Val Gln Pro Ser Tyr Ala Gly Gly Val
225         230         235         240
Lys Ser Leu Ser Ser Ala Glu His Asn Ala Leu Leu His Ser Pro Gly
245         250         255
Ser Leu Thr Pro Pro Pro His Lys Ser Asn Val Ser Ala Met Glu Glu

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260 265 270
 Leu Val Glu Lys Val Thr Gly Lys Val Asn Ile Lys Lys Glu Glu Arg
 275 280 285
 Pro Pro Glu Lys Glu Lys Ser Ser Leu Ala Lys Ala Ala Ser Pro Ile
 290 295 300
 Ala Lys Glu Asn Lys Asp Phe Pro Lys Thr Glu Glu Val Ser Gly Lys
 305 310 315 320
 Pro Gln Lys Lys Gly Pro Glu Ala Glu Thr Trp Glu Ala Lys Lys Glu
 325 330 335
 Gly Pro Leu Asp Val His Thr Pro Asn Gly Thr Glu Pro Leu Lys Ala
 340 345 350
 Lys Val Thr Asn Gly Cys Asn Asn Leu Gly Ile Ile Met Asp His Ser
 355 360 365
 Pro Glu Pro Ser Phe Ile Asn Pro Leu Ser Ala Leu Gln Ser Ile Met
 370 375 380
 Asn Thr His Leu Gly Lys Val Ser Lys Pro Val Ser Pro Ser Leu Asp
 385 390 395 400
 Pro Leu Ala Met Leu Tyr Lys Ile Ser Asn Ser Met Leu Asp Lys Pro
 405 410 415
 Val Tyr Pro Ala Thr Pro Val Lys Gln Ala Asp Ala Ile Asp Arg Tyr
 420 425 430
 Tyr Tyr Glu Asn Ser Asp Gln Pro Ile Asp Leu Thr Lys Ser Lys Asn
 435 440 445
 Lys Pro Leu Val Ser Ser Val Ala Asp Ser Val Ala Ser Pro Leu Arg
 450 455 460
 Glu Ser Ala Leu Met Asp Ile Ser Asp Met Val Lys Asn Leu Thr Gly
 465 470 475 480
 Arg Leu Thr Pro Lys Ser Ser Thr Pro Ser Thr Val Ser Glu Lys Ser
 485 490 495
 Asp Ala Asp Gly Ser Ser Phe Glu Glu Ala Leu Asp Glu Leu Ser Pro
 500 505 510
 Val His Lys Arg Lys Gly Arg Gln Ser Asn Trp Asn Pro Gln His Leu
 515 520 525
 Leu Ile Leu Gln Ala Gln Phe Ala Ser Ser Leu Arg Glu Thr Thr Glu
 530 535 540
 Gly Lys Tyr Ile Met Ser Asp Leu Gly Pro Gln Glu Arg Val His Ile
 545 550 555 560
 Ser Lys Phe Thr Gly Leu Ser Met Thr Thr Ile Ser His Trp Leu Ala
 565 570 575
 Asn Val Lys Tyr Gln Leu Arg Arg Thr Gly Gly Thr Lys Phe Leu Lys
 580 585 590
 Asn Leu Asp Thr Gly His Pro Val Phe Phe Cys Asn Asp Cys Ala Ser
 595 600 605
 Gln Phe Arg Thr Ala Ser Thr Tyr Ile Ser His Leu Glu Thr His Leu
 610 615 620
 Gly Phe Ser Leu Lys Asp Leu Ser Lys Leu Pro Leu Asn Gln Ile Gln
 625 630 635 640
 Glu Gln Gln Asn Val Ser Lys Val Leu Thr Asn Lys Thr Leu Gly Pro
 645 650 655
 Leu Gly Ala Thr Glu Glu Asp Leu Gly Ser Thr Phe Gln Cys Lys Leu
 660 665 670
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 675 680 685

<210> 586

<211> 1898

<212> DNA

<213> Homo Sapiens

<400> 586

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cagctgggac cctgtggag gtgggcgaca ganacttcac cctggagccc ctgagagggg      300
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cgggtctcagg gcgtgtccag ctgccccagc ccttgggtga gaagtcagaa ctggcccca      420
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<210> 587

<211> 399

<212> PRT

<213> Homo Sapiens

<400> 587

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Ala Leu Gly Gln Pro Ala Pro Leu Leu Pro Ala Ala Val Gly Ala Val
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Ser Leu Ala Thr Ser Gln Leu Pro Ser Pro Pro Leu Gly Pro Thr Val
 20              25              30
Pro Pro Gln Pro Pro Ser Ala Leu Glu Ser Asp Gly Glu Gly Pro Pro
 35              40              45
Pro Arg Val Gly Phe Val Asp Ser Thr Ile Lys Ser Leu Asp Lys Leu
 50              55              60
Arg Thr Leu Leu Tyr Gln Glu His Val Pro Thr Ser Ser Ala Ser Ala
 65              70              75              80
Gly Thr Pro Val Glu Val Gly Asp Arg Phe Thr Leu Glu Pro Leu Arg

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<210> 588
<211> 707
<212> DNA
<213> Homo Sapiens
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<400> 588							
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acnatcccan	acagtttagta	ccagatactt	gcatgttana	aggaggtnat	tttcatgcca	600
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<210> 589
 <211> 551
 <212> DNA
 <213> Homo Sapiens

<400> 589						
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<210> 590
 <211> 478
 <212> DNA
 <213> Homo Sapiens

<400> 590						
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<210> 591
 <211> 707
 <212> DNA
 <213> Homo Sapiens

<400> 591						
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tgaaaggctc	tctaccacan	ggnacaggaa	atgactgggg	caaggacagg	gcccatcccc	660
tcattaaatg	tnatactccg	ccttatcngt	cctaaangaa	tgtncaa		707

<210> 592
 <211> 541
 <212> DNA
 <213> Homo Sapiens

<400> 592
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 cccccccctn ttngtttttn atcctntagg gggcacctgn cttnantngg cncaaaggat 180
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 gcnngtgnaa taantaatcc caccattncg naccaaattt actgnaacct gaacngggtg 300
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<210> 593
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 <212> DNA
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 gaaag 605

<210> 594
 <211> 666
 <212> DNA
 <213> Homo Sapiens

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 caaaaagaac agtcattgaa aaatgctgac ttatgcattg cctcaggaac aaagggtggc 540
 ctgtttaatc gactacgac ccagacagtt ngtaccagat acttgcattg anaaggaggt 600
 aattttccat gccagttccc accagtgggg agcctttttt attcnctctt gggatgatga 660
 tgaatc 666

<210> 595

<211> 600
 <212> DNA
 <213> Homo Sapiens

<400> 595
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 <212> DNA
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 tggagtga aa ttctgtcctg taagttcaag cattgctacg tccccaccgc cattcaactg 600
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 tcnttattgg ttcttttggg antggaatgg cctgaaattg aaatattctt ccttgaaaaa 780
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<210> 597
 <211> 443
 <212> DNA
 <213> Homo Sapiens

<400> 597
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 cccttgatgc ncagtttgaa aatgatgaac gaattacacc cttggaatcn gccctgatga 360
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<210> 598
 <211> 491
 <212> DNA

<213> Homo Sapiens

<400> 598

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gaggattcag ttaccgcaga ctgtttgtca ctaacacttt ttcttgatc caaattagct      180
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<210> 599

<211> 802

<212> DNA

<213> Homo Sapiens

<400> 599

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gaggattcag ttaccgcaga ctgtttgtca ctaacacttt ttcttgatc caaattagct      180
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<210> 600

<211> 523

<212> DNA

<213> Homo Sapiens

<400> 600

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gccaggaggc gtggaggggc ccagggatgg ccacccccac agggagtcag ggagggcctg      180
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ataacaaatt taaaccttgc tctctgtcc cactgggttna accctggccc atccccatc      420
cctgggtcca tcccaggggc ccagcctccg atnactctc anaaacacng ccttntgtct      480
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<210> 601

<211> 530

<212> DNA

<213> Homo Sapiens

<400> 601

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<210> 602

<211> 311

<212> DNA

<213> Homo Sapiens

<400> 602

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gganccgctg	cggntnecgn	tgtgccnctt	ggtgcncgga	anancanggc	tacngttct	180
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<210> 603

<211> 289

<212> DNA

<213> Homo Sapiens

<400> 603

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<210> 604

<211> 356

<212> DNA

<213> Homo Sapiens

<400> 604

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gcgctgggga	ccgcntgntc	naggtcnacn	gcgtcaacnt	ggaggcgat	accacncct	300
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<210> 605

<211> 290

<212> DNA

<213> Homo Sapiens

<400> 605

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<210> 606

<211> 714

<212> DNA

<213> Homo Sapiens

<400> 606

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tgtttacata gttctttggg attttactgt tctaatttt attctgaaac tcaattttac	660
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<210> 607

<211> 687

<212> DNA

<213> Homo Sapiens

<400> 607

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ggattttact gttcctaatt ttattctgaa actccatttt tccccagacc ataattacc	660
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<210> 608

<211> 994

<212> DNA

<213> Homo Sapiens

<400> 608

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<210> 609

<211> 843

<212> DNA

<213> Homo Sapiens

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tngcaaatat	ttaaccttnc	ttgaaaangg	aaatttntac	caanggacng	aaancnttnt	180
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<210> 610

<211> 707

<212> DNA

<213> Homo Sapiens

<400> 610

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<210> 611

<211> 663
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 <213> Homo Sapiens

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 tga 663

<210> 612
 <211> 621
 <212> DNA
 <213> Homo Sapiens

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 aagtaatctc anaaaaaaa gggttttttg aattaaactt gactttttaa aaatcatac 180
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 gnggacggcn anntnttnat agnnggagt gtnctttcaa ccagctaata ntgaagaaat 480
 catctagtcg nctgctctn cccactgcc gtgcctgcnt ccttgcaacn tcttttaacc 540
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<210> 614

<211> 673

<212> DNA

<213> Homo Sapiens

<400> 614

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acagcctgtg	acagagaatg	agttttcttt	ggaatctgag	attattttcaa	aactatacat	420
cccaaagaga	aagattatct	ctccacgata	tataaaagat	gtgtcttcctc	ctgttgaaga	480
ggctgttgac	aggtgtctct	acctactgga	ccgttttgca	cagcctgtga	caaagggata	540
agtttgcctt	ggaatctgag	aatattttcag	aaccatactt	tacgaacaga	aggactattc	600
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<210> 615

<211> 714

<212> DNA

<213> Homo Sapiens

<400> 615

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acagaatctt	cctcgtcact	tgtacccttc	aagggtgggtg	gtttctgana	anacactttc	180
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<210> 616

<211> 688

<212> DNA

<213> Homo Sapiens

<400> 616

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 <212> DNA
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<400> 617
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 gccgagggct gccggtccgg gctccgctca gcacctcaa cggcgagatc agcgccctga 480
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<210> 618
 <211> 461
 <212> DNA
 <213> Homo Sapiens

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 aaaanaccca ancttnacca ttttttaaan tttctgcttt ncaaaaaanta aaaacnncna 180
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<210> 619
 <211> 751
 <212> DNA
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 cccagggcct ggcaggaacg tcacagtggc ctcgagcagg agccccgggt gccttatcgc 180
 ccatctacga cgggggtctc cacggcctgc agagtaagat agaagaccac ctggacgang 240
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 aactgaaggc ccccgggccc ggaccattac ggaacaagt cgtcccttg nagggaaaaa 660
 actgaaggac cgggaaaagg cncatggcaa ttacncccc ggaaccgggt ccttccggg 720
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 <211> 556
 <212> DNA
 <213> Homo Sapiens

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 gcaaaaaaag cttaaaaaaa ccaaaaacca aaggcagcat ccttgctaata tttcatctac 180
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 tgtcanccca ngcaanaggg ccaanatgca attcagggat cntgggaca ggtccaaat 480
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<210> 621
 <211> 708
 <212> DNA
 <213> Homo Sapiens

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 caacaaaaac ttgtttaaat ngttccttna atttnnacta cttaaaaanca taggtntaaa 180
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 aaaaactnat atattccaaa ttncggcat ntggnaatnt tncatggac nctgnatctt 300
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 tggatnanaa cntttttcta catnactatt gaaaaaacct gtggtttctt gctttttaac 660
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 <211> 675
 <212> DNA
 <213> Homo Sapiens

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<210> 623
 <211> 713
 <212> DNA
 <213> Homo Sapiens

<400> 623
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 <212> DNA
 <213> Homo Sapiens

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 ccagaganaa natgaatccg attcattgat tcaagagctt gagacatctg ntaaganaat 360
 aattncacan aatctggaga attnnagaat tgatnaatat nattgatcnn tcgaagatac 420
 tatcancgaa tttcagaacc tnangtctca tatggaaaac tcnttttaaat gcnatgacaa 480
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 acctaaggga cagc 554

<210> 625
 <211> 551
 <212> DNA
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 gcacaatana ntgactataa tcaataataa cttacttgta tttttttaa tgatctaaaa 240
 aatgtaattg gattatctgt aattcaaagg aaaaatgctt gaggggatgg atacctcatt 300
 ctccatgata cacgtnnttc acattgatgc ctgtgtcaaa acatctcaca taccctgtaa 360
 atatatacat gtactatgta ccacaaaatg tttacaaaat aagtganaca ttctaattaa 420
 agactgaaat ctttttctaa ataattgata tacatgtttt gtgatctgta cacacttatt 480
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 aaaaaaatcc t 551

<210> 626
 <211> 680

<212> DNA

<213> Homo Sapiens

<400> 626

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cgactcgatc	aatgcccattg	ccccagccag	ctgtgggggg	cagcccatat	tccagggcag	360
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<210> 627

<211> 753

<212> DNA

<213> Homo Sapiens

<400> 627

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<210> 628

<211> 675

<212> DNA

<213> Homo Sapiens

<400> 628

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gttaaancca	ccttaacata	aaccttatng	caattntaca	cntcttttga	acncaatcta	180
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 <212> DNA
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<210> 630
 <211> 665
 <212> DNA
 <213> Homo Sapiens

<400> 630
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 ggcgtgcacc accacgcgca gctaattttt ttgtattttt agtaaaggcg aggtttcgcc 180
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<210> 631
 <211> 698
 <212> DNA
 <213> Homo Sapiens

<400> 631
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 tgatgttact ggtcaatggc agtaatcctg aagggtgaaga tcctgagagg gaacctgtan 180
 aaaatgaaga ttatagagaa aagtcttcag atgatgatga aatggattct tccttgggtct 240
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 aatatgtaga catcantatt attgccctta ctcgaaatcg gaggacaagg agatgggtaca 420
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698

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 ttaaacaggt attcttagag gggtatatga attgctatca gaagctgttg gctaacaagc 180
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 gacctgtnc tttatcatata acttcaaaaa ggaaagctcc ttantccaaa aagcctanat 420
 gctgaggtat agcccttgaa atgttttctt ccctgtnaat ttccta 466

<210> 633
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 <212> DNA
 <213> Homo Sapiens

<400> 633
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 ncacctatgg tatgctgcat attaaattta acatttcaag taacatatat atagcaaaca 600
 ttcagccaaa tactctttca tgaaaagata ctgtccttaa aataaaaagt tantgaaaag 660
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<210> 634
 <211> 822
 <212> DNA
 <213> Homo Sapiens

<400> 634
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 acccagcagc agttcctccc tggattgggc ccaggtgata actgctgtnt ctgctccgcc 720

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<210> 635
 <211> 819
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 cttgagttga agaattgatt ctccctcaac gtttttaggca gatttcagtc atctgattta 480
 gacagcttcc gtttcacatg tegtgaagt cccaagtgtc actatcatct gtttcttctt 540
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 tatgtgattt gtttaacaaat tcatcaaggt cttgctcatt aaaaaacttg tgcttcaggt 720
 tataatcctt aanttttgcg gttccagttt taaattttat gaatnaatgg tcccttggtc 780
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<210> 636
 <211> 704
 <212> DNA
 <213> Homo Sapiens

<400> 636
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 nccatcgaca gtgacgtgt aggtgaancc gctgttgccc tgggcgcgga tctcgatctc 480
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 aaggteacct ggatgccaca tcngcanggt cggaaccctg gccgccatac cccaactggg 660
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<210> 637
 <211> 693
 <212> DNA
 <213> Homo Sapiens

<400> 637
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 agccaccttc aatgaatct tcaaatgga aaatactgct tcaccacctg ttggggataa 180
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 cctctaaatc cccactgttg ctgttgctga tattgtncct tcgacatggc tactttttatt 360

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agctctatgg	attccacctc	accaaaacca	ccaaagtact	cccttatttt	ctcttcaggt	540
gtatctggan	aaaggccacc	ancnaaaatt	ttttaaccgg	ctctttttgt	tccatggctt	600
tgggcctttt	angatcaatc	accttcccca	ttcaatttat	gttctttttg	gatccatgaa	660
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<210> 638

<211> 619

<212> DNA

<213> Homo Sapiens

<400> 638

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tgattgatcc	taaaagggcc	aaagccatga	aaacaaaaga	gccggttaaa	aaattttttgt	180
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tggttggtctt	agtaaagtgt	aaataaaaagt	agccatgtcg	aaggaacaat	atcagcaaca	420
gcaacagtgg	ggatctanag	gaggatttgc	angaagagct	cgtggaagan	gtgggtggccc	480
cactcaaaac	tggaaccang	gatatanntna	ctattggaat	cnaggctatg	gcaactatgg	540
atatnacagc	ccagggttacc	gtggttntgg	aagatatgac	tncactgggt	acnacaacta	600
ctatggatat	ggtgattat					619

<210> 639

<211> 694

<212> DNA

<213> Homo Sapiens

<400> 639

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ngccagggan	aggcgcagga	gcctttgcag	ccacgcgcgc	gccttccctg	tcttggtgtgc	180
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ttgttaaact	gcctcttga	aatttttnatn	ctatccnngg	ggcnatcaaa	ggggtttttg	660
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<210> 640

<211> 728

<212> DNA

<213> Homo Sapiens

<400> 640

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tcacagatca	ggtgatgcag	aatcctcgag	ttctggcagc	tttacaggag	cgacttgaca	180
atgtccctca	caccccttcc	agctacatcg	aaactttacc	taaagcagta	aaaagaagaa	240
ttaatgcatt	gaaacaactt	caggtgagat	gtgctcacat	agaagccaag	ttctatgaag	300

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aggtacatga cttggaaaga aagtatgcag cgctatacca gcctctcttt gacaagagaa      360
gagaatttat caccggcgat gctgaaccaa cagatgcgga atcggaatgg cacagtgaag      420
atgaagagga agagaaattg gctggagaca tgaaaagtaa agtagtcgtc acagaaaaag      480
cagcggcaac ggctgaagag ccagatccca naggaattcc agagttctgg ttaccatct      540
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acacctgcag gatnttaaag ttgaaatttt ctgacctggg acagcctatg tcttttgtgt      660
tagaattcca ctttgaaccc cagcactact ttaccaactc agtcctgaca aaaaccttac      720
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<210> 641

<211> 732

<212> DNA

<213> Homo Sapiens

<400> 641

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acctaattag atagaagttc aggaatttct atttcttttg ggttgatgaa ccacaggcta      60
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ctgtgttcac aagttccctg aagcttaggt tttgagagaa tattgttgag tccactaggca      180
gggctcacat aggaaactgg caatcacctc tgaaactgct tcacagacac ctgcttttcc      240
tgctctgttc ctcanacttc tctcttcaa gcgtattccc cccacaacaa ggacagcagc      300
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cacaattcag ggccactctg caccaacaga gataagcacc caggtggaag ccccccttcc      420
ccgagcctca tacattgtca tcatcttcta tggcctcccc agtgaagtac agcacagccc      480
gcgggactat ccgctcacgg aaaaagtgtc caatttcaaa atcagaagct aatgtgaatt      540
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aaaaggactc attgggtact gtttcgtaat tgttctaaca gtgcctcaac cttatgcttc      660
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<210> 642

<211> 582

<212> DNA

<213> Homo Sapiens

<400> 642

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naaggcgctg cctgatttcc tcaagctcct ccttctctct ctctctatct cgttcatctg      180
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tggggctcct tctatcatca tcatagtctt ctaanaattc ttttagtcgt tttagcttct      300
tgggccatttc tcttctctct tcttctcttc tttcagcttc tttctcatat tcccgggttt      360
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gttttttctc ttttctctct tctcgtctcc gttctctctc cttctctctc ctcgtctccg      540
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<210> 643

<211> 784

<212> DNA

<213> Homo Sapiens

<400> 643

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aagaaattct tcttgaaaga gccagtcaga aacgtggaga attgcaaact aaactcaaga      180

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cagaaggacc	ttcaaaaact	gatgattcta	cttcagggag	caagaagctc	ctccactatc	240
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gagacnaaaa	agcnaaaaag	gatacaactt	gcatcaagct	aaagattgat	agtgaatta	360
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aagangctcc	gggtgagaac	nccgggggtg	acctccctaa	aattccagtc	cagagatgtg	720
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<210> 644

<211> 749

<212> DNA

<213> Homo Sapiens

<400> 644

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canattttccc	tatgagaaac	aaaactggcc	acctacagca	aaatatcaaaa	atgggtaagt	540
ccttctctcc	tcttctctct	gatttatatac	aacatatctc	ctttcaagac	tattattttcc	600
atcatgttta	ttccttcaca	aatctaaacc	ttgaggtgat	atgaaggaaa	ccancntcaa	660
aaaaaagaaa	actcaattcc	gaaatgaana	aaactgggcn	nggtatncaa	tacnccccan	720
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<210> 645

<211> 751

<212> DNA

<213> Homo Sapiens

<400> 645

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acaaaattat	tttttaaaaa	agcaaaa	taaagaatat	atacaaaa	gacctggaat	180
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ggtaagtcct	tccttctctc	tcctctctgat	tatntacaac	atatctcctt	tcaagantat	600
tatttccatc	atgcttattc	cttcccaaat	ctaaaccttg	aagggtgattt	gaagggaaac	660
cnccatccnn	aaaaagaaaa	accttctccc	aaattgaaaa	aaaactnggc	agggtatata	720
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<210> 646

<211> 760

<212> DNA

<213> Homo Sapiens

<400> 646

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<210> 647

<211> 1041

<212> DNA

<213> Homo Sapiens

<400> 647

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taagcatgtc	aaccggatca	anataatgng	gntgcaacag	ttaaagntta	aaaaattggg	1020
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<210> 648

<211> 810

<212> DNA

<213> Homo Sapiens

<400> 648

ccctacatca	gttttattta	aaacacaaac	aantattttct	ctttctgtaa	gggcaaattg	60
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ttattttttta	aaaaagcaaa	agaataaana	atatatacaa	aagggacctg	naatctgtaa	180
gctgattcca	aaaacnaaat	aantanaaaa	tccatgggtga	aacctgaaca	ttctacctct	240
gctttggana	agggtatca	tacaacattc	antcagctga	aatggatttg	gtaaagggtg	300
gtctatacat	aaacttcant	cattttttgt	tgtgcaaaat	catcccaatc	ttcccaaaac	360
tgaatgggca	gtcctgtggc	tttcttcctt	ttccatattc	ccaacaaggc	taentgaant	420

tcaactcttg	atnagccgct	tacaacagca	gttccttagg	agccaacatg	acaggtgggt	480
caaatttccc	tatgaanaaa	caaaactggc	cacctacagc	aaaatatcaa	aatgggtaag	540
tccttccttc	ctcttcctcc	tgattatata	caacatatct	cctttcaaga	ctattatttc	600
catcatgctt	attccttcac	aaatctaaac	cttgaggtga	tatgaaggaa	accancatca	660
agaaaagaaa	accaattcan	aaatgaanaa	aactggcagg	tntacaatac	accccananc	720
atctcaatat	ccctggcaca	gttacaattc	agtgttctgc	tacagcccat	aaaataaata	780
ttggcagctt	gaataanenc	atTTTTTccc				810

<210> 649

<211> 656

<212> DNA

<213> Homo Sapiens

<400> 649

cccnacatca	nttttattta	aaacacaaaac	aattatttct	cttntctgtaa	gggcaaatgg	60
ttcaaataat	gcgnaacaca	aaacnttgac	taatacaatt	gcttttaaata	tnaaacaaaa	120
ttatttttta	aaaaancaaa	aaaataaaaa	atatntacaa	aagggacctg	aaatctgtaa	180
nctnatncca	aaaacaaaat	aattaaaaaa	tccatggtna	aacctnaacn	tnctacctct	240
gcttnggaaa	agggetatca	tacaacntnc	antcanctna	aaatggatng	gtaaaggtn	300
ntctatacat	aaacttcant	cattttngct	tgtgcaaaat	cancecaatc	tncccaaaaac	360
tnaatgggca	ntcctgtggc	ttntctnctt	tnccatatnc	ccaacaaggc	tacttnaatt	420
tcaactcttn	ataanccgct	tacaacagca	ntncttagn	anccaacatn	acaggtgggt	480
caaattcccc	tataaaaaac	aaaactggcc	ncctacanca	aaatatcaaa	atgggtaatt	540
ccttctncc	tctnccnct	nattatatac	aacatttctc	ctttcaaaac	tattattncc	600
atcatgcttn	ttcctncaca	aatctaaacc	ttgangtgat	ttgaagggaac	cacctc	656

<210> 650

<211> 645

<212> DNA

<213> Homo Sapiens

<400> 650

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aantggtnca	aatantgcgn	aaencaaaaac	tttnactaat	acaattgctt	taaatntaaa	120
ncaaanttat	tttttataaaa	acaaaaaaa	taaaaaatnt	ttccaaaangg	gacctgaaan	180
ctntaaccta	atccccaaaa	caaaataatt	aaaaannccn	nggtnaancc	tnaacntnct	240
nccnctnctt	tgnaaaaagg	ctatcanaca	acntncattc	ncctaaaaat	gnatnggtaa	300
aggtttttct	anacataaac	ttcattcatt	ttggcttntn	caaaancacc	ccaancncc	360
caaaaactnaa	tgggcnncc	ntggcttnt	ccctttccca	tnncccaac	aaggctactt	420
naattncaac	ncttnataac	ccccttacia	caccattncc	ttagnacca	cataacaggt	480
gggtcaaat	ncccnataaa	aaacaaaant	ggccccncc	ccaaaatncc	caaatgggta	540
ttctnctn	ccctcccccc	ngnatatata	caacatntcc	cctttcanaa	atatattccc	600
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<210> 651

<211> 780

<212> DNA

<213> Homo Sapiens

<400> 651

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ctcttttctc	cgacattttt	atgtttctaa	cattgaactc	taaggaagct	ggtgaacaaa	120
cacgccatat	gtatgcagaa	cacttaacag	aattatgcta	tgtgtctgt	ttttgtttgt	180
atttcttgtc	cttgctgaag	attgacttga	aatcttaaac	taagttctcc	ctctttatag	240
gcggtgacag	tgatcctcca	ttaaagcgta	gcctggcaca	gaggctaggg	aagaaagttg	300

aagctccaga	aactaacatt	gacaaaacac	caaagaaagc	tcaagtttcc	aagtctctta	360
aggagcgatt	aggcatgtca	gctgatccag	ataatgagga	tgcaacagat	aaagttaata	420
aagttggtga	gatccatgtg	aagacattag	aagaaattct	tcttgaaaga	gccagtcaga	480
aacgtggaga	attgcaaact	aaactcaaga	cagaaggacc	ttcaaaaact	gatgattcta	540
cttcaggagc	aagaagctcc	tccactatcc	gtatcaaaac	cttctctgag	gtcctggctg	600
aaaaaaaaaca	tcngcagcag	ggaactgaag	agacaaaaaa	gccnaaagga	tacaacttgc	660
atcaagctaa	agattgatag	tgaaattaaa	aaaaacagta	atcttngcca	cccattgttg	720
ccngcagaag	acaatcanaa	gaacctgcag	gtaaaacaaa	ntctatgcag	ggagggtgcc	780

<210> 652

<211> 518

<212> DNA

<213> Homo Sapiens

<400> 652

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aaatggttca	aataatgcgg	aacacaaaaac	nttnactaat	acaattgctt	taaatntnaa	120
acaaaattat	tttttataaa	ancaaaaaaa	taaaaaatnt	ttncaaaang	gacctgaaat	180
ctntaanctn	atnccaaaaa	caaaaataatt	naaaaaatcca	nggtgaaacc	tnaactnct	240
neenctgctt	tggaaaaggg	ctntcataca	acnttcattc	ncctaaaaat	ggattggtaa	300
angttttnt	atacataaac	tncatttcatt	tttgcttntg	caaaatcanc	ccaanctncc	360
caaaactnaa	tgggcantcc	tntggcttcc	tncttttccc	anatncccaa	caaggctact	420
tnaatttcaa	cncttnataa	nccgcttaca	acancatttc	cttaggancc	aacatnacgg	480
tgggtcaaat	cccctataaa	aaacaaaact	ggccnccct			518

<210> 653

<211> 490

<212> DNA

<213> Homo Sapiens

<400> 653

gttaataaag	ttggtgagat	ccatgtgaag	acattagaag	aaattcttct	tgaaagagcc	60
agtcagaaac	gtggagaatt	gcaaactaaa	ctcaagacag	aaggaccttc	aaaaactgat	120
gattctactt	caggagcaag	aagctcctcc	actatccgta	tcaaaaacct	ctctgaggtc	180
ctggctgaaa	aaaaacatcg	gcagcaggaa	gcagagagac	aaaaaagcaa	aaaggatata	240
acttgcatca	agctaaagat	tgatagtga	attaaaaaaa	cagtagtttt	gccacccatt	300
gttgccagca	gaggacaatc	agaggagcct	gcaggtaaaa	caaagtctat	gcaggggagg	360
gcacatcaag	acgctggaag	aaattaaact	ggagaaggca	ctgagggtgc	agcagagctc	420
tgagagcagc	accagctccc	cgtctcaaca	cnaggccact	ccaagggcaa	ggcggctgct	480
gcnaatcccc						490

<210> 654

<211> 359

<212> DNA

<213> Homo Sapiens

<400> 654

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tccaattatn	ncgaacncca	aaccttnaan	natnccaatt	ncttaaatnt	taaaccaa	120
tnntttttta	aaaagccaaa	naattaagaa	ttttttccaa	agggaaacng	aatccnttag	180
ggtaatccca	aaaccaaatt	agttaaaaa	ccctggntaa	accnaacnt	tcnccnccn	240
ccttggaaaa	agggnnnccn	ncnaccttcc	atnncnntaa	aatgaatgg	ntaaagnttt	300
ttcnncctt	aacntccatc	ctttttgnet	nttccaaaac	ctccccancc	cccccaaaa	359

<210> 655

<211> 611
 <212> DNA
 <213> Homo Sapiens

<400> 655
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 catcangcta angattgata gtgaaattaa aaaaacagta tttttgccac ccattgttgc 120
 cancagagga caatcanagg agcctgcagg taaaannaag tctatgcagg aggtgcacat 180
 caagacgctg gaagaaatta aactggagaa ggcactgagg gtgcagcana gctctgagag 240
 cagcaccagc tccccgtctc aacacnaagc cactccatgg gcnangeggc tgctgcgant 300
 cncnnaaaga ncagggatga angaagagaa gaaccttcag gaaggaaatg aatttgattc 360
 tcagancatt attataactg aagctnnana ngcttcnggt gagaccacng ganttgacat 420
 cactaaaatt ccagtcaaga gatgtgagac catgagagag aagcacatgc aaaaaacanc 480
 nngagagggg aaaatcagtc ttgacacctc ttcggggaga ttagcatctc tgcggnaccc 540
 aantggcaga gaaaccagtg ctactgctg tgccaggaat cacncggcac ctgaccaagc 600
 ggcttccccac a 611

<210> 656
 <211> 634
 <212> DNA
 <213> Homo Sapiens

<400> 656
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 tcaaataatg cggaacacna aacattgact aatacaantn ctttaaataat gaaacaaaat 120
 tattttttta aaaancnaaa naataaagaa tatntncaaa agggacctgg aatctgttag 180
 ctgattccaa aaacnaaata anttnaaaat cntgggtgaa acctgaacat tctacctctg 240
 ctttggaataa gggntatcat acaacattca gtctgctgaa aatggattgg taaaagtntn 300
 tctatacata aacttcagtc atttttgctt gtncaaaatc atcccaatct tcccaaaant 360
 gaatgggcag tctgtgtggt ttcttctctt tccatattcc caacaaggnt acntnaantt 420
 caactcttga nnancgctt acaacagcag ttccttagga nccccatgac aggtgggctn 480
 aatttcccta tnaaaaacaa aactggggccc tacagcaaaa tatccaaatg ggttagtctc 540
 tcttctctct tcccttgant atatacacat atctctcttc aanaatanta tttccccatg 600
 cttattctct cccnaatcta aaccttgaag tgat 634

<210> 657
 <211> 958
 <212> DNA
 <213> Homo Sapiens

<400> 657
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 tgaaattcta ccctctaaga aaatgaaagt ttctaacaac aaaaagaagc cagaggaaga 120
 aggcagtgtc catcaagata ctgctgaaaa gaatgcatct tccccagaga aagccaaggg 180
 tagacatact gtgccttgta tgccacctgc aaagcagaag tttctaaaaa gtactgagga 240
 gcaagagctg gagaagagta tgaaaatgca gcaagagggt gtggagatgc ggaaaaagaa 300
 tgaagaattc aagaaacttg ctctggctgg aatagggcaa cctgtgaaga aatcagttag 360
 ccaggctacc aaatcagttg acttccactt ccgcacagat gagcgaatca aacaacatcc 420
 taagaaccag gaggaatata aggaagtga ctttacatct gaactacgaa agcatccttc 480
 atctcctgcc cgagtgacta agggatgtac cattgttaag cctttcaacc tgtcccaagg 540
 aaagaaaaga acatttgatg aaacagtttc tacatatgtg ccccttgac agcaagttga 600
 agacttccat aaacgaaccc ctaacagata tcatttgagg agcaagaagg atgatattaa 660
 cctgttacc tccaaatctt ctgtgaccaa gatttgaga gaccacagg actcctgtac 720
 tgcaaaacaan acaccgtgca cgggctgtga cctgcaaaaa gtacagcaga gctggaggct 780
 gaggagctnc gagaaattgc aaccantaca anttccaaag cacgtngaac cttgattccc 840

agaataactt ganggggtggg cccaaccttg cccaagaaaa ccaccngtga aancaancca 900
acggagccct antnggcttt gatttgggaa tttgggaaan gaatncaagg gagngag 958

<210> 658
<211> 816
<212> DNA
<213> Homo Sapiens

<400> 658
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tcctgttgtt tatcagcacc agtaaggaaa gaacgtgcct taacggcagc cccaccaga 120
gcctgctgct tggctgctgt gaggtcctcc atgaatccac gcagtcttct tcctcactgg 180
tgcagttggt gaggttttct accctcacag caaagggatc cttaactata aattcacggt 240
atgcagagaa gaggacagaa tctgatttac tgattgttcc tcattttaac catgacttaa 300
tctctatctt aggatttaac tatctttatt ttctgggttaa aatttttaaa aaaagtgggg 360
agaggggtgag agtcgtaagg ggcaatagca atagagatta cactgtgctg acacagagac 420
taaattctag tcagagtga gaccatataa aaggccggct gatgggttaa aggaagtaac 480
tacatggagt ctaatcgaga cattcatgan ttacatctca ttattagcct tagtaatgta 540
agaaaacaat tctcaacaaa actgggagtc cacagttgtc aagtatgctt tctcangcac 600
gggtaggtaa aagtctggan aaatgggttc tctccatgcc caatgacaaa gcaagacggg 660
cctaggtttg aagttaaaaa caggtcccaa ttgcccgggc ggtatccgcc agctcacagc 720
tgaatttaan catggaaatc caatggaaaa attggganat acnggcacat tcanaaggct 780
ggctctttga cttatctcca naaccgggt actggc 816

<210> 659
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 659
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gtcacaagtt aaaagctctt attcctatga tgccccctcg gatttcatca atttttcatc 120
cttggatgat gaaggagata ctcaaaacat agattcatgg tttgaggaga aggccaat 180
ggagaataag ttactgggga agaattggaac tggagggctt tttcagggca aaactccttt 240
gagaaaggct aatcttcagc aagctattgt cacacctttg aaaccagttg acaacactta 300
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ttccctggaa gttgagggcag ccatatcaag aaaaactcca gcccagcctc agagaagatc 420
tcttaggctt tctgctcaga aggatttggg acagaaagaa aagcatcatg taaaaatgaa 480
agccaagaga tgtgccactc ctgtaatcat cgatgaaatt ctacctcta agaaaatgaa 540
agtttctaac ancacaaaga agccagagga agaaggcagt gctcatcaag atactgctga 600
aaagaatgca tcttccccaa gagaaagcca agggtagaca tactgtgcct tgtatgccac 660
ctgcanagca gaagtttcna aaangtactg angagcaang aatctggaga agagtatgaa 720
aatgc 726

<210> 660
<211> 824
<212> DNA
<213> Homo Sapiens

<400> 660
aggatttaac tatctttatt ttctgggttaa aatttttaaa aaaagtgggg agaggggtgag 60
agtcgtaagg ggcaatagca atagagatta cactgtgctg acacagagac taaattctag 120
tcagagtga naccatata aaaggccggc tgatgggtta aaggaagtaa ctacatggag 180
tctaactgag acattcatga gttacatctc attattagcc ttagtaatgt aagaaaacaa 240
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aagtctggaan	aaatggggttc	tctccatgcc	caatgacaaa	gcaagacggt	cctaggtttg	360
agggttaagan	caggtcccat	tgccgggagg	tatccgcagc	tcacagctga	ntttagcagt	420
ggaatcgagt	ggagaatttg	gggagatata	ggcncagtca	gaggctgggc	acttgacttt	480
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ctggccanct	cctctttttt	ctgctcttcc	tcctgtagtc	tggcctcctc	caactgctgg	600
gctttctggg	cttctacctc	agccattctc	ttctccagct	ccctgccgct	ctttggctct	660
ctctcagtag	cccactgaaa	angtccttga	acnaaaaaaa	ccanaaanng	gccctcacaa	720
ctgatttcnt	ctctttcttg	gggaaccaag	ggcccttgaa	aaaanaaacg	gtgtttggaa	780
caaaccntga	aacaagcngc	ctccttctgc	ctgtcccaat	tcct		824

<210> 661

<211> 399

<212> DNA

<213> Homo Sapiens

<400> 661

ggtttgnagg	gaaaaanaaa	actttttttt	cccagnccag	ttcttaaant	nccccnngen	60
nggtcccctn	tntttttcnc	ccccattaag	gaaaaaactt	gentnancgg	nagccccccc	120
caaaacctnc	tgcttggtcg	ctttaaggnc	ccataannc	cccccatnnt	cctccccccac	180
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tttncaaaaa	aaaananaaa	accaattttn	gatnntcccc	cttnaancca	gnacttaatc	300
cctntctnag	gattnaacaa	cctttttttt	cgggttaaaa	tttttaaaaa	aattngggaa	360
anggttaaant	ccttaggggg	aatnccnata	aaaattacc			399

<210> 662

<211> 826

<212> DNA

<213> Homo Sapiens

<400> 662

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gcctcagaga	agatctctta	ggctttctgc	tcagaaggat	ttggaacaga	aagaaaagca	120
tcagtataaa	atgaaagcca	agagatgtgc	cactcctgta	atcatcgatg	aaattctacc	180
ctctaagaaa	atgaaagttt	ctaacaacaa	aaagaagcca	gaggaagaag	gcagtgtctca	240
tcaagatact	gctgaaaaga	atgcattctc	cccagagaaa	gccaaagggt	gacatactgt	300
gccttgtag	ccacctgcaa	agcagaagtt	tctaaaaagt	actgaggagc	aagagctgga	360
gaagagtatg	aaaatgcagc	aagagggtgt	ggagatgcgg	aaaaagaatg	aagaattcaa	420
gaaacttgct	ctggctggaa	tagggcaacc	tgtgaagaaa	tcagtgaagc	aggtcaccaa	480
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aacntttgat	gaaacagttt	ctacatatgt	gccccttgcc	cngcaagttg	aagacttccn	720
taancgaacc	ctnactgatt	tcttttgang	aaccagaang	gntgattttt	ccctgtttcc	780
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<210> 663

<211> 770

<212> DNA

<213> Homo Sapiens

<400> 663

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gctgcgtggc	tgctgtgagg	ctccccatga	atccacgcag	tcttcttctt	cactgggtgca	180
gttggtgagg	ttttctaccc	tcacagcaaa	gggatcctta	actataaatt	cacgggtatgc	240

anagaanagg	acagaatctg	atttactgat	tgttccctcat	ttaaaccatg	acttaatctc	300
tatcttagga	tttaactatc	tttattttct	ggttaaaatt	tttaaaaaaa	gtggggagag	360
ggtgagagtc	gtaaggggca	atagcaatag	agattacact	gtgctgacac	agagactaaa	420
ttctagtcag	agtgaagacc	catataaaa	gccggctgat	ggtttaaagg	aagtaactac	480
atggagtcta	atcgagacat	tcatgagttt	catctcatta	ttagccttag	taatgtaaga	540
aaacnattct	caacaaaact	ggagtccaca	gttgtcaant	ntgctttctc	aggcacgggt	600
aggtnaaaat	ctgganaaat	gggttctctc	catgcccaat	gacaanacan	anggtcctag	660
gtttgaagtt	aaaaacangt	cccattgccg	gcggtatccg	cagctcacag	ctgaattttac	720
cngtggaatc	aantggaaaa	tttgggaaaa	tacnggccca	atcaaaaggt		770

<210> 664

<211> 593

<212> DNA

<213> Homo Sapiens

<400> 664

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tacaccaaaa	gcagcagctc	tgatgaggag	tacattttata	tgaacaaagt	gaccatcaac	120
aagcaacaga	atgcagagtc	tcaaggcaaa	gcgcctgagg	agcagggcct	gctacccaat	180
ggggagccca	gccagcactc	ctcgccccct	cagaagagcc	ttccagacct	cccgccacc	240
aagatgattc	cagaacggaa	acagcttgcc	atcccaaaga	cggagtctcc	agagggttac	300
tatgaagagg	ctgagccata	tgacacatcc	ctcaatgagg	acggagaggc	tgtgagcagc	360
tcttacgagt	cctacgatga	anaggacggc	agcaaggcca	agtcggcccc	ttaccantgg	420
ncctcgccgg	aggccggcat	cganctgatg	cgtgagcccc	gcntctgcgc	cttctgttgg	480
cgcaagaaa	tggtctgggac	agtggggcaa	gcagctctgt	gtcatcnagg	acaacagggt	540
tctgtgctnc	naatcctcca	aggaccccng	ccctcagctg	gacgtgaacc	tac	593

<210> 665

<211> 1024

<212> DNA

<213> Homo Sapiens

<400> 665

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aaaggacaag	tatgacctct	cagaagagct	tccagcaact	gaccatggag	aaggaacagg	180
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<212> DNA

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<212> DNA

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<212> DNA

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<210> 677

<211> 1362

<212> DNA

<213> Homo Sapiens

<400> 677

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<210> 678

<211> 1771

<212> DNA

<213> Homo Sapiens

<400> 678

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<210> 679

<211> 1367

<212> DNA

<213> Homo Sapiens

<400> 679

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<210> 680

<211> 2545

<212> DNA

<213> Homo Sapiens

<400> 680

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<210> 681

<211> 1745

<212> DNA

<213> Homo Sapiens

<400> 681

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<210> 682

<211> 1745

<212> DNA

<213> Homo Sapiens

<400> 682

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<210> 683

<211> 3127

<212> DNA

<213> Homo Sapiens

<400> 683

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 <213> Homo Sapiens

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 Gln Val Ser Ala Asn Asn Gln Phe Ser Ile Thr Lys Asn Arg Asp Gly
 50 55 60
 Arg Glu Asn Arg Arg Arg Asn Ser Lys Ile Gly Asp Asp Asn Glu Asn
 65 70 75 80
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 Thr Asn Glu Tyr Asn Ser Asn Asp Gly Lys Lys Leu Pro Gln Gly Glu
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 Ser Arg Ser Tyr Glu Val Met Gly Ser Met Glu Glu Thr Leu Cys Asn
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 Ile Asp Asp Arg Asp Gly Asn Arg Asn Val His Leu Glu Phe Thr Glu
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 145 150 155 160
 Glu Glu Arg Lys Phe Gln Lys Leu Lys Asn Lys Glu Glu Val Leu Lys
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 Leu Cys Glu Val Lys Leu Ala Phe Lys Cys Asp Gly Glu Ile Lys Thr
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 Gln Gly Gly Arg Lys Tyr Gly Ile Gln Glu Lys Arg Asp Lys Thr Leu
 275 280 285
 Ile Asp Ser Xaa His Arg Ala Gly Glu Ile Thr Ser Asp Gly Leu Ser
 290 295 300
 Phe Leu Phe Leu Lys Glu Val Lys Val Ala Lys Pro Glu Glu Met Lys
 305 310 315 320
 Asn Leu Glu Thr Gln Glu Glu Glu Phe Ser Glu Leu Glu Glu Leu Asp
 325 330 335
 Glu Glu Ala Ser Gly Met Glu Asp Asp Glu Asp Thr Ser Gly Leu Glu
 340 345 350
 Glu Glu Glu Glu Glu Glu Ala Ser Gly Leu Glu Glu Asp Xaa Ser Ser
 355 360 365
 Xaa Leu Glu Glu Glu Glu Glu Gln Thr Ser Glu Gln Asp Ser Thr Phe
 370 375 380
 Xaa Gly His Thr Leu Val Asp Ala Lys His Glu Val Glu Ile Thr Ser

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Thr Ser Leu Thr Glu Lys Lys Ala Ser Arg Arg Gln Lys Glu Ile Pro
          435          440          445
Phe Ser Tyr Leu Val Gly Asp Ser Gly Lys Lys Lys Leu Val Lys His
          450          455          460
Gln Val Val His Lys Thr Gln Glu Glu Glu Glu Thr Ala Val Pro Thr
465          470          475          480
Ser Gln Gly Thr Gly Thr Thr Cys Leu Thr Leu Cys Leu Ala Ser Pro
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Ser Lys Ser Leu Glu Met Ser His Asp Glu His Lys Lys His Ser His
          500          505          510
Thr Asn Leu Ser Ile Ser Thr Gly Val Thr Lys Leu Lys Lys Thr Glu
          515          520          525
Glu Lys Lys His Arg Thr Leu His Thr Glu Glu Leu Thr Ser Lys Glu
          530          535          540
Ala Asp Leu Thr Glu Glu Thr Glu Glu Asn Leu Arg Ser Ser Val Ile
545          550          555          560
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          565          570          575
His Ser Gly Val Leu Glu Ile Glu Asn Ser Val Asp Asp Leu Ser Ser
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Arg Met Asp Ile Leu Glu Glu Arg Ile Asp Ser Leu Glu Asp Gln Ile
          595          600          605
Glu Glu Phe Ser Lys Asp Thr Met Gln Met Thr Lys Gln Ile Ile Ser
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Lys Glu Gly Pro Arg Asp Ile Glu Glu Arg Ser Arg Ser Cys Asn Ile
625          630          635          640
Arg Leu Ile Gly Ile Pro Glu Lys Glu Ser Tyr Glu Asn Arg Ala Glu
          645          650          655
Asp Ile Ile Lys Glu Ile Ile Asp Glu Asn Phe Ala Glu Leu Lys Lys
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Gly Ser Ser Leu Glu Ile Val Ser Ala Cys Arg Val Pro Ser Lys Ile
          675          680          685
Asp Glu Lys Arg Leu Thr Pro Arg His Ile Leu Val Lys Phe Trp Asn
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Ser Ser Asp Lys Glu Lys Ile Ile Arg Pro Ser Arg Glu Arg Arg Glu
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Ile Thr Tyr Gln Gly Thr Arg Ile Arg Leu Thr Ala Asp Leu Ser Leu
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Asp Thr Leu Asp Ala Arg Ser Lys Trp Ser Asn Val Phe Lys Val Leu
          740          745          750
Leu Glu Lys Gly Phe Asn Pro Arg Thr Leu Tyr Pro Ala Lys Met Ala
          755          760          765
Phe Asp Phe Arg Gly Lys Thr Lys Val Phe Leu Ser Ile Glu Glu Phe
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Asn Ile Pro

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<210> 685

<211> 947

<212> PRT

<213> Homo Sapiens

<400> 685

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Gln Tyr Leu Gln Lys Val Val Leu Lys Asp Leu Trp Lys His Ser Phe
      35           40           45
Ser Trp Pro Phe Gln Arg Pro Val Asp Ala Val Lys Leu Lys Leu Pro
      50           55           60
Asp Tyr Tyr Thr Ile Ile Lys Asn Pro Met Asp Leu Asn Thr Ile Lys
65           70           75           80
Lys Arg Leu Glu Asn Lys Tyr Tyr Ala Lys Ala Ser Glu Cys Ile Glu
      85           90           95
Asp Phe Asn Thr Met Phe Ser Asn Cys Tyr Leu Tyr Asn Lys Pro Gly
      100          105          110
Asp Asp Ile Val Leu Met Ala Gln Ala Leu Glu Lys Leu Phe Met Gln
      115          120          125
Lys Leu Ser Gln Met Pro Gln Glu Glu Gln Val Val Gly Val Lys Glu
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Arg Ile Lys Lys Gly Thr Gln Gln Asn Ile Ala Val Ser Ser Ala Lys
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Glu Lys Ser Ser Pro Ser Ala Thr Glu Lys Val Phe Lys Gln Gln Glu
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Gln Gly Ala Ser Val Asn Ser Ser Ser Gln Thr Ala Ala Gln Val Thr
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Lys Gly Val Lys Arg Lys Ala Asp Thr Thr Thr Pro Ala Thr Ser Ala
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Val Lys Ala Ser Ser Glu Phe Ser Pro Thr Phe Thr Glu Lys Ser Val
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Gly Leu His Asn Tyr Tyr Asp Val Val Lys Asn Pro Met Asp Leu Gly
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Thr Ile Lys Glu Lys Met Asp Asn Gln Glu Tyr Lys Asp Ala Tyr Ser
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Phe Ala Ala Asp Val Arg Leu Met Phe Met Asn Cys Tyr Lys Tyr Asn
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Pro Pro Asp His Glu Val Val Thr Met Ala Arg Met Leu Gln Asp Val
      355          360          365
Phe Glu Thr His Phe Ser Lys Ile Pro Ile Glu Pro Val Glu Ser Met
      370          375          380
Pro Leu Cys Tyr Ile Lys Thr Asp Ile Thr Glu Thr Thr Gly Arg Glu
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 Asp Glu Arg Val Lys Arg Leu Ala Lys Leu Gln Glu Gln Leu Lys Ala
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 Val His Gln Gln Leu Gln Val Leu Ser Gln Val Pro Phe Arg Lys Leu
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 Asn Lys Lys Lys Glu Lys Ser Lys Lys Glu Lys Lys Lys Glu Lys Val
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 Lys Glu Lys Ser Lys Arg Asn Gln Pro Lys Lys Arg Lys Gln Gln Phe
 485 490 495
 Ile Gly Leu Lys Ser Glu Asp Glu Asp Asn Ala Lys Pro Met Asn Tyr
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 645 650 655
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 675 680 685
 Lys Met Lys Asn Glu Cys Ile Leu Pro Glu Gly Arg Thr Gly Val Thr
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 725 730 735
 Leu Ala Phe Asn Tyr Gln Glu Leu Glu His Leu Gln Thr Val Lys Asn
 740 745 750
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 770 775 780
 Met Leu Glu Ser Glu Cys Gln Ala Pro Val Gln Lys Asp Ile Lys Ile
 785 790 795 800
 Lys Asn Ala Asp Ser Trp Lys Ser Leu Gly Lys Pro Val Lys Pro Ser
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 Gly Val Met Lys Ser Ser Asp Glu Leu Phe Asn Gln Phe Arg Lys Ala
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 Ala Ile Glu Lys Glu Val Lys Ala Arg Thr Gln Glu Leu Ile Arg Lys

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Arg Asp Leu Gly Asn Gly Leu Thr Val Glu Ser Phe Ser Asn Lys Ile		
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Gln Asn Lys Cys Ser Gly Glu Glu Gln Lys Glu His Pro Gln Ser Ser		
885	890	895
Glu Ala Gln Asp Lys Ser Lys Leu Trp Leu Leu Lys Asp Arg Asp Leu		
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Ala Arg Pro Lys Glu Gln Glu Arg Arg Arg Arg Glu Ala Met Val Gly		
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 <212> DNA
 <213> Homo Sapiens

<400> 686

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<211> 1759

<212> DNA

<213> Homo Sapiens

<400> 687

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1759

<210> 688

<211> 207

<212> PRT

<213> Homo Sapiens

<400> 688

Met Ser Glu Thr Val Pro Ala Ala Ser Ala Ser Ala Gly Leu Ala Ala
 1 5 10 15
 Met Glu Lys Leu Pro Thr Lys Lys Arg Gly Arg Lys Pro Ala Gly Leu
 20 25 30
 Ile Ser Ala Ser Arg Lys Val Pro Asn Leu Ser Val Ser Lys Leu Ile
 35 40 45
 Thr Glu Ala Leu Ser Val Ser Gln Glu Arg Val Gly Met Ser Leu Val
 50 55 60
 Ala Leu Lys Lys Ala Leu Ala Ala Ala Gly Tyr Asp Val Glu Lys Asn
 65 70 75 80
 Asn Ser Arg Ile Lys Leu Ser Leu Lys Ser Leu Val Asn Lys Gly Ile
 85 90 95
 Leu Val Gln Thr Arg Gly Thr Gly Ala Ser Gly Ser Phe Lys Leu Ser
 100 105 110
 Lys Lys Val Ile Pro Lys Ser Thr Arg Ser Lys Ala Lys Lys Ser Val
 115 120 125
 Ser Ala Lys Thr Lys Lys Leu Val Leu Ser Arg Asp Ser Lys Ser Pro
 130 135 140
 Lys Thr Ala Lys Thr Asn Lys Arg Ala Lys Lys Pro Arg Ala Thr Thr
 145 150 155 160
 Pro Lys Thr Val Arg Ser Gly Arg Lys Ala Lys Gly Ala Lys Gly Lys
 165 170 175
 Gln Gln Gln Lys Ser Pro Val Lys Ala Arg Ala Ser Lys Ser Lys Leu
 180 185 190
 Thr Gln His His Glu Val Asn Val Arg Lys Ala Thr Ser Lys Lys
 195 200 205

<210> 689

<211> 1464

<212> DNA

<213> Homo Sapiens

<400> 689

agtaccgggt acgcaggggt gcctcaacca cactccgtcc acggactctc cgttatttta 60
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 aaggaagaat ttcctctgaa gcaccggaac ttgctactac cagcaccatg ccctaccaat 180
 atccagcact gaccccgagg cagaagaagg agctgtctga catcgctcac cgcacgtgg 240
 cacctggcaa gggcatcctg gctgcagatg agtccactgg gagcattgcc aagcggtgc 300
 agtccattgg caccgagaac accgaggaga accggcgctt ctaccgccag ctgctgctga 360
 cagctgacga ccgcgtgaac cctgcattg ggggtgtcat cctcttccat gagacactct 420
 accagaaggc ggatgatggg cgtcccttcc cccaagttat caaatccaag ggcgggtgtg 480
 tgggcatcaa ggtagacaag ggcgtgggtc cctggcagg gacaaatggc gagactacca 540
 cccaaggggt ggatgggctg tctgagcgt gtgccagta caagaaggac ggagctgact 600
 tcgccaagtg gcgttgtgtg ctgaagattg gggaacacac cccctcagcc ctgcgcacatca 660
 tggaaaatgc caatgttctg gcccgttatg ccagtatctg ccagcagaat ggcattgtgc 720
 ccacgtgga gcctgagatc ctccctgatg gggaccatga cttgaagcgc tgccagtatg 780
 tgaccgagaa ggtgctggct gctgtctaca aggcctcagc tgaccaccac atctacctgg 840

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aaggcacctt gctgaagccc aacatgggtca cccaggccca tgcttgcaact cagaagtttt 900
ctcatgagga gattgccatg gcgaccgtca cagcgctgcg ccgcacagtg ccccccgctg 960
tcactgggat caccttctctg tctggaggcc agagtgagga ggaggcgctc atcaacctca 1020
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cgagcgggtca ggctggggct gctgccagcg agtccctctt cgtctctaac cagcctatt 1260
aagcggaggt gttcccaggc tgcccccaac aactccaggc cctgccccct cccactcttg 1320
aagaggaggc cgctcctctg gggctccagg ctggcttgcc cgcgctcttt cttccctcgt 1380
gacagtgggtg tgtggtgtcg tctgtgaatg ctaagtccat caccctttcc ggcacactgc 1440
caaataaaca gctattttaag gggg 1464

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<210> 690

<211> 363

<212> PRT

<213> Homo Sapiens

<400> 690

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Pro Tyr Gln Tyr Pro Ala Leu Thr Pro Glu Gln Lys Lys Glu Leu Ser
1      5      10      15
Asp Ile Ala His Arg Ile Val Ala Pro Gly Lys Gly Ile Leu Ala Ala
20     25     30
Asp Glu Ser Thr Gly Ser Ile Ala Lys Arg Leu Gln Ser Ile Gly Thr
35     40     45
Glu Asn Thr Glu Glu Asn Arg Arg Phe Tyr Arg Gln Leu Leu Leu Thr
50     55     60
Ala Asp Asp Arg Val Asn Pro Cys Ile Gly Gly Val Ile Leu Phe His
65     70     75     80
Glu Thr Leu Tyr Gln Lys Ala Asp Asp Gly Arg Pro Phe Pro Gln Val
85     90     95
Ile Lys Ser Lys Gly Gly Val Val Gly Ile Lys Val Asp Lys Gly Val
100    105    110
Val Pro Leu Ala Gly Thr Asn Gly Glu Thr Thr Thr Gln Gly Leu Asp
115    120    125
Gly Leu Ser Glu Arg Cys Ala Gln Tyr Lys Lys Asp Gly Ala Asp Phe
130    135    140
Ala Lys Trp Arg Cys Val Leu Lys Ile Gly Glu His Thr Pro Ser Ala
145    150    155    160
Leu Ala Ile Met Glu Asn Ala Asn Val Leu Ala Arg Tyr Ala Ser Ile
165    170    175
Cys Gln Gln Asn Gly Ile Val Pro Ile Val Glu Pro Glu Ile Leu Pro
180    185    190
Asp Gly Asp His Asp Leu Lys Arg Cys Gln Tyr Val Thr Glu Lys Val
195    200    205
Leu Ala Ala Val Tyr Lys Ala Leu Ser Asp His His Ile Tyr Leu Glu
210    215    220
Gly Thr Leu Leu Lys Pro Asn Met Val Thr Pro Gly His Ala Cys Thr
225    230    235    240
Gln Lys Phe Ser His Glu Glu Ile Ala Met Ala Thr Val Thr Ala Leu
245    250    255
Arg Arg Thr Val Pro Pro Ala Val Thr Gly Ile Thr Phe Leu Ser Gly
260    265    270
Gly Gln Ser Glu Glu Glu Ala Ser Ile Asn Leu Asn Ala Ile Asn Lys
275    280    285
Cys Pro Leu Leu Lys Pro Trp Ala Leu Thr Phe Ser Tyr Gly Arg Ala

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290	295	300
Leu Gln Ala Ser Ala Leu Lys Ala Trp Gly Gly	Lys Lys Glu Asn Leu	
305	310	315
Lys Ala Ala Gln Glu Tyr Val Lys Arg Ala	Leu Ala Asn Ser Leu	
	325	330
Ala Cys Gln Gly Lys Tyr Thr Pro Ser Gly Gln	Ala Gly Ala Ala Ala	
	340	345
Ser Glu Ser Leu Phe Val Ser Asn His Ala Tyr		350
355	360	

<210> 691
 <211> 1216
 <212> DNA
 <213> Homo Sapiens

<400> 691

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ctggcagtc	agctctccaa	ggggcgtgag	agtgttctga	tcctctccac	agaccagca	180
cacaacatct	cagatgcttt	tgaccagaag	ttctcaaagg	tgcttaccac	gggtcaaaggc	240
tatgacaacc	tctttgctat	ggagattgac	cccagcctgg	gcgtggcgga	cgtgcctgac	300
gagttcttcg	aggaggacaa	catgctgagc	atgggcaaga	agatgatgca	ggaggccatg	360
agcgcatctc	ccggcatcga	tgaggccatg	agctatgccg	aggtcatgag	gctggtgaag	420
ggcatgaact	tctcggtggt	ggtatttgac	acggcaccac	cgggccacac	cctgaggctg	480
ctcaacttcc	ccaccatcgt	ggagcggggc	ctgggcccgc	ttatgcagat	caagaaccag	540
atcagccctt	tcctctcaca	gatgtgcaac	atgctggggc	tgggggacat	gaacgcagac	600
cagctggcct	ccaagctgga	ggagacgctg	cccgtcatcc	gctcagtcag	cgaacagttc	660
aaggaccctg	agcagacaac	tttcatctgc	gtatgcattg	ctgagttcct	gtccctgtat	720
gagacagaga	ggctgatcca	ggagctggcc	aagtgcaga	ttgacacaca	caatataatt	780
gtcaaccagc	tcttcttccc	cgaccccag	aagccctgca	agatgtgtga	ggcccgtcac	840
aagatccagg	ccaagtatct	ggaccagatg	gaggacctgt	atgaagactt	ccacatcgtg	900
aagctgccgc	tgttacccca	tgaggtgcgg	ggggcagaca	aggtcaacac	cttctcggcc	960
ctctctctgg	agccctacaa	gccccccagt	gcccagtagc	acagctgcca	gccccaccg	1020
ctgccatttc	acactcaccc	tccaccctcc	ccacccccctc	ggggcagagt	ttgcacaaag	1080
tcccccccat	aatacagggg	gagccacttg	ggcaggaggc	agggaggggg	ccattccccc	1140
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aaatgatctt	aaactg					1216

<210> 692
 <211> 1958
 <212> DNA
 <213> Homo Sapiens

<400> 692

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gggaccagc	cctaggcaga	accaggcgc	cgcgcccggg	acgcccgcgg	agagagccac	120
tcccgcacc	gtcccatctc	gcccctcgcg	tccggagtcc	ccgtggccag	atctaaccat	180
gagctaccct	ggctatcccc	cgccccaggg	tggctaccca	ccagctgcac	caggtggtgg	240
tccctgggga	ggtgctgect	accctcctcc	gcccagcatg	ccccccatcg	ggctggataa	300
cgtggccacc	tatgcggggc	agttcaacca	ggactatctc	tcgggaatgg	cggccaacat	360
gtctgggaca	tttgaggagg	ccaacatgcc	caacctgtac	cctggggccc	ctggggctgg	420
ctaccaccca	gtgcccctg	gcggctttgg	gcagccccc	tctgcccagc	agcctgttcc	480
tccctatggg	atgtatccac	ccccaggagg	aaacccaccc	tccaggatgc	cctcatatcc	540
gccataccca	ggggcccctg	tgccggggca	gcccagcca	ccccccggac	agcagcccc	600
aggggcctac	cctgggcagc	caccagtgc	ctaccctggg	cagcctccag	tgccactccc	660

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tgggcagcag cagccagtgc cgagctaccc aggatacccg ggggtctggga ctgtcacccc 720
cgctgtgccc ccaacccagt ttggaagccg aggcaccatc actgatgctc cgggctttga 780
ccccctgcga gatgccgagg tcctgcgga ggcctatgaaa ggcttcggga cggatgagca 840
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cttcaagacg gcttacggca aggatttgat caaagatctg aaatctgaac tgtcaggaaa 960
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caaggccatg aggggggcag gaacaaagga ccggaccctg attcgcatca tgggtgtctcg 1560
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gtaccacgac atctcgggag atacttcagg ggattaccgg aagattctgc tgaagatctg 1680
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tcaccgtcct agagcttagg cctgtcttcc accctcctg acccgatatg tgtgccacag 1860
gacctgggtc ggtctagaac tctctcagga tgccttttct accccatccc tcacagcctc 1920
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<210> 693

<211> 505

<212> PRT

<213> Homo Sapiens

<400> 693

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Met Ser Tyr Pro Gly Tyr Pro Pro Pro Gly Gly Tyr Pro Pro Ala
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Ala Pro Gly Gly Gly Pro Trp Gly Gly Ala Ala Tyr Pro Pro Pro
20          25          30
Ser Met Pro Pro Ile Gly Leu Asp Asn Val Ala Thr Tyr Ala Gly Gln
35          40          45
Phe Asn Gln Asp Tyr Leu Ser Gly Met Ala Ala Asn Met Ser Gly Thr
50          55          60
Phe Gly Gly Ala Asn Met Pro Asn Leu Tyr Pro Gly Ala Pro Gly Ala
65          70          75          80
Gly Tyr Pro Pro Val Pro Pro Gly Gly Phe Gly Gln Pro Pro Ser Ala
85          90          95
Gln Gln Pro Val Pro Pro Tyr Gly Met Tyr Pro Pro Pro Gly Gly Asn
100          105          110
Pro Pro Ser Arg Met Pro Ser Tyr Pro Pro Tyr Pro Gly Ala Pro Val
115          120          125
Pro Gly Gln Pro Met Pro Pro Pro Gly Gln Gln Pro Pro Gly Ala Tyr
130          135          140
Pro Gly Gln Pro Pro Val Thr Tyr Pro Gly Gln Pro Pro Val Pro Leu
145          150          155          160
Pro Gly Gln Gln Gln Pro Val Pro Ser Tyr Pro Gly Tyr Pro Gly Ser
165          170          175
Gly Thr Val Thr Pro Ala Val Pro Pro Thr Gln Phe Gly Ser Arg Gly
180          185          190
Thr Ile Thr Asp Ala Pro Gly Phe Asp Pro Leu Arg Asp Ala Glu Val
195          200          205

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Leu Arg Lys Ala Met Lys Gly Phe Gly Thr Asp Glu Gln Ala Ile Ile
 210 215 220
 Asp Cys Leu Gly Ser Arg Ser Asn Lys Gln Arg Gln Gln Ile Leu Leu
 225 230 235 240
 Ser Phe Lys Thr Ala Tyr Gly Lys Asp Leu Ile Lys Asp Leu Lys Ser
 245 250 255
 Glu Leu Ser Gly Asn Phe Glu Lys Thr Ile Leu Ala Leu Met Lys Thr
 260 265 270
 Pro Val Leu Phe Asp Ile Tyr Glu Ile Lys Glu Ala Ile Lys Gly Val
 275 280 285
 Gly Thr Asp Glu Ala Cys Leu Ile Glu Ile Leu Ala Ser Arg Ser Asn
 290 295 300
 Glu His Ile Arg Glu Leu Asn Arg Ala Tyr Lys Ala Glu Phe Lys Lys
 305 310 315 320
 Thr Leu Glu Glu Ala Ile Arg Ser Asp Thr Ser Gly His Phe Gln Arg
 325 330 335
 Leu Leu Ile Ser Leu Ser Gln Gly Asn Arg Asp Glu Ser Thr Asn Val
 340 345 350
 Asp Met Ser Leu Ala Gln Arg Asp Ala Gln Glu Leu Tyr Ala Ala Gly
 355 360 365
 Glu Asn Arg Leu Gly Thr Asp Glu Ser Lys Phe Asn Ala Val Leu Cys
 370 375 380
 Ser Arg Ser Arg Ala His Leu Val Ala Val Phe Asn Glu Tyr Gln Arg
 385 390 395 400
 Met Thr Gly Arg Asp Ile Glu Lys Ser Ile Cys Arg Glu Met Ser Gly
 405 410 415
 Asp Leu Glu Glu Gly Met Leu Ala Val Val Lys Cys Leu Lys Asn Thr
 420 425 430
 Pro Ala Phe Phe Ala Glu Arg Leu Asn Lys Ala Met Arg Gly Ala Gly
 435 440 445
 Thr Lys Asp Arg Thr Leu Ile Arg Ile Met Val Ser Arg Ser Glu Thr
 450 455 460
 Asp Leu Leu Asp Ile Arg Ser Glu Tyr Lys Arg Met Tyr Gly Lys Ser
 465 470 475 480
 Leu Tyr His Asp Ile Ser Gly Asp Thr Ser Gly Asp Tyr Arg Lys Ile
 485 490 495
 Leu Leu Lys Ile Cys Gly Gly Asn Asp
 500 505

<210> 694

<211> 1141

<212> DNA

<213> Homo Sapiens

<400> 694

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 cctgatgggt ggaaggaacc agctttttcc aaagaggaca atcccagagg acttttggag 180
 gagagcagtt tcgcaacttt gttcccaaaa tacaggggaag cttacttgaa agagtgttgg 240
 ccattggtgc agaaagcctt aaatgaacat catgttaatg caaccctgga cctgatcgaa 300
 ggcagcatga ctgtttgtac tacaaagaag acttttgcac catatatcat cattagggcc 360
 agagatctga taaaactggt agcaaggagt gtttcatttg aacaggcagt acgaattctt 420
 caggatgatg ttgcatgtga catcattaaa ataggttctt tagtaaggaa taaagagaga 480
 tttgtaaaac gaagacaacg gcttattggt cccaaaggat ctacattgaa ggcattggaa 540
 ctcttaacta attgttacat tatgggttcag ggaaacacag ttccagccat tggacctttt 600

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agtggccttaa aagagggttag aaaagtagtc cttgatacta tgaagaatat tcatccaatt 660
tataacatta aaagcttaat gattaagaga gagttggcaa aagattctga attacgatca 720
caaagttggg agagattttt gccacagttc aaacacaaaa atgtgaataa acgcaaggaa 780
ccaaagaaaa aaactgttaa gaaagatata cgccattccc accaccacaa ccagaaaagtc 840
agatcgataa agaattggct agtgggtgaat actttttgaa ggcaaatacag aagaagcggc 900
agaaaatgaa gcaataaagg ctaaacaagc agaagccatc agtaagagac aagaggaaaag 960
aaacaaagca tttattccac ctaaggaaaa accaattgtg aaacctaagg aagcttctac 1020
tgaaactaaa attgatgtgg ccagcatcaa ggaaaagggtt aagaaaagcaa agaataagaa 1080
actggggagct cttacagctg aagaaattgc acttaagatg gaggcagatg aaaaaaaaaa 1140
a 1141

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<210> 695
 <211> 288
 <212> PRT
 <213> Homo Sapiens

<400> 695

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Met Ala Ser Pro Ser Leu Glu Arg Pro Glu Lys Gly Ala Gly Lys Ser
1          5          10          15
Glu Phe Arg Asn Gln Lys Pro Lys Pro Glu Asn Gln Asp Glu Ser Glu
20          25          30
Leu Leu Thr Val Pro Asp Gly Trp Lys Glu Pro Ala Phe Ser Lys Glu
35          40          45
Asp Asn Pro Arg Gly Leu Leu Glu Glu Ser Ser Phe Ala Thr Leu Phe
50          55          60
Pro Lys Tyr Arg Glu Ala Tyr Leu Lys Glu Cys Trp Pro Leu Val Gln
65          70          75          80
Lys Ala Leu Asn Glu His His Val Asn Ala Thr Leu Asp Leu Ile Glu
85          90          95
Gly Ser Met Thr Val Cys Thr Thr Lys Lys Thr Phe Asp Pro Tyr Ile
100          105          110
Ile Ile Arg Ala Arg Asp Leu Ile Lys Leu Leu Ala Arg Ser Val Ser
115          120          125
Phe Glu Gln Ala Val Arg Ile Leu Gln Asp Asp Val Ala Cys Asp Ile
130          135          140
Ile Lys Ile Gly Ser Leu Val Arg Asn Lys Glu Arg Phe Val Lys Arg
145          150          155          160
Arg Gln Arg Leu Ile Gly Pro Lys Gly Ser Thr Leu Lys Ala Leu Glu
165          170          175
Leu Leu Thr Asn Cys Tyr Ile Met Val Gln Gly Asn Thr Val Ser Ala
180          185          190
Ile Gly Pro Phe Ser Gly Leu Lys Glu Val Arg Lys Val Val Leu Asp
195          200          205
Thr Met Lys Asn Ile His Pro Ile Tyr Asn Ile Lys Ser Leu Met Ile
210          215          220
Lys Arg Glu Leu Ala Lys Asp Ser Glu Leu Arg Ser Gln Ser Trp Glu
225          230          235          240
Arg Phe Leu Pro Gln Phe Lys His Lys Asn Val Asn Lys Arg Lys Glu
245          250          255
Pro Lys Lys Lys Thr Val Lys Lys Asp Ile Arg His Ser His His His
260          265          270
Asn Gln Lys Val Arg Ser Ile Lys Asn Trp Leu Val Val Asn Thr Phe
275          280          285

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<210> 696

<211> 1008

<212> DNA

<213> Homo Sapiens

<400> 696

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atactacagt gaagaaacct gaatcaaaga aggaacagac cccagagcat gggaagaaaa      120
aacgtggcag aggaaaagcc caagttaaag caacaaatga atccgaagac gaaatcccac      180
agctgggtacc aataggaaaag aagactccag ctaatgaaaa agtagagatt caaaaacatg      240
ccacagggaa gaagtctcca gcaaagagtc ctaatcccag cacacctcgt gggaagaaaa      300
agaaaggctt tgccagcatc tgagacccca aaagctgcag agtctgagac cccagggaaa      360
agcccagaga agaagcctaa aatcaaagaa gaggcagtga aggaaaaaag tccttcgctg      420
gggaaaaaag atgcgagaca gactcccaaa aaagccagag gccaaagttt tcaccattcc      480
tagtaaatct gtgagaaaag ctccccacac ccccaaaaaa tggcccaaaa aacccaaagt      540
accccagtcg acctaaagtc agtgattcaa ctggaaggaa acctcaatgc tgcctccaga      600
gcttttttga aatactcaga tcctggccgc ctttgttaacc ttctctaaac gtcaggcctg      660
gacttaaaag atttttttaa acctccataa gtagtccagg ggcggtggct cagcctgta      720
atcccagcac tttgggaggc cgaggcaggc ggatcacaag gtcaacgaga tcgagaccat      780
cctggccaac atggtgaaac cctgtctgta ccaaaaatac aaaaattaat tgggcatggt      840
ggtggacacc tgtaatccca gctactaggg aggtgaggc aggagaattg cttgaacctg      900
ggaggcggag gttgcagtga gccactgcac tccagcctga tgacagagca agactcagtc      960
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<210> 697

<211> 685

<212> DNA

<213> Homo Sapiens

<400> 697

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aaaaanaaaa aagaaaaaag anaatgcccc gcgcggtggc taatgcctgt aaccctagtg      120
agacagccaa gtaaaaacgg ctcccaagac aatctacaag cactgggagg atgggggtgca      180
gcacaaaaat gttcacacca tttgcagagg ggaacagcct ggcccctgct gttccaggat      240
agtaaccagg aattcagttg gtgagatgga cagcctgtta gcaggactcc atctcacttt      300
gctgtgttgt tctttttccc ttttgcceaa taaattngta acccctcacc tttcaaagtg      360
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cactttggga ggcgaagatg ggctgattgc ttgagctcag gggtttaaga acagcctggg      480
caacatagtg aaaccctagt ttttaccaaa aatacgaaaa ttaaccaggc atgcctgtta      540
tcccagctga ggcacaagaa tccctgaac ccaggaggcn gaanncta attnnaaccgca      600
aaatttgenc ccactggccc ccccaggcgg aagctagtga gccgagattg cgccactgca      660
cccctgagac gctgtntcaa aaaaaa      685

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<210> 698

<211> 1205

<212> DNA

<213> Homo Sapiens

<400> 698

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ggatgtgctt ttacatggaa ctccctgacca aaaacgaaaa ctcatcagag aatgtcttac      180
cggagaaaagt gaatcatcta gtgaagatga atttgaaaag gagatggaag ctgaattaaa      240
ttctaccatg aaaacaatgg aggacaagtt atcctctctg ggaactggat cttcctcagg      300
aaatggaaaa gttgcaacag ctccgacaag gtactacgat gatatatatt ttgattctga      360
ttccgaggat gaagacagag cagtacaggt gaccaagaaa aaaaagaaga aacaacacaa      420

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gattccaaca	aatgacgaat	tactgtntga	tectgaaaaa	gataacagag	atcaggcctg	480
ggttgatgca	cagagaaggg	gttaccatgg	tttgggacca	cagagatcac	gtcaacaaca	540
gcctgttcca	aatagtgatg	ctgtcttgan	ttgtcctgcc	tgcatgacca	cactttgcct	600
tgattgcca	aggcatgant	catacaaaac	tcaatataga	gcaatgtttg	taatgaattg	660
ttctattaac	aaagaggagg	ttctaagata	taaagcctca	gagaacagga	agaaaaggcg	720
ggcccataag	aagatgaggt	ctaaccggga	agatgctgcc	gagaaggcag	agacagatgt	780
ggaagaaatc	tatcacccag	tcatgtgcac	tgaatgttcc	actgaagtgg	cagtctacga	840
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<212> DNA

<213> Homo Sapiens

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<211> 1967

<212> DNA

<213> Homo Sapiens

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 <212> DNA
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<212> DNA

<213> Homo Sapiens

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<211> 1095

<212> DNA

<213> Homo Sapiens

<400> 703

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<211> 1968

<212> DNA

<213> Homo Sapiens

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<211> 800

<212> DNA

<213> Homo Sapiens

<400> 705

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<210> 706

<211> 487

<212> DNA

<213> Homo Sapiens

<400> 706

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<210> 708

<211> 1123

<212> PRT

<213> Homo Sapiens

<400> 708

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Pro His Gly Asp Tyr Arg Gly Gly Glu Gly Pro Gly His Asp Phe Arg
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Gly Gly Asp Phe Ser Ser Ser Asp Phe Gln Ser Arg Asp Ser Ser Gln
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Leu Asp Phe Arg Gly Arg Asp Ile His Ser Gly Asp Phe Arg Asp Arg
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Glu Gly Pro Pro Met Asp Tyr Arg Gly Gly Asp Gly Thr Ser Met Asp
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Tyr Arg Gly Arg Glu Ala Pro His Met Asn Tyr Arg Asp Arg Asp Ala
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Gly Arg Gly Thr Tyr Asp Leu Asp Phe Arg Gly Arg Asp Gly Ser His
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Glu Gln Ser Arg Ser Asp Phe Arg Asn Arg Asp Val Ser Asp Leu Asp
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Gly Thr Thr Asp Leu Asp Phe Arg Asp Arg Asp Thr Pro His Ser Asp
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 His Ser Gly Met Asn Val Asn Arg Arg Glu Glu Ser Thr His Asp His
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 Thr Ile Glu Arg Pro Ala Phe Gly Ile Gln Lys Gly Glu Phe Glu His
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Arg Thr Ala Gln Pro Gln Lys Arg Glu Glu Gln Thr Lys Lys Glu Asn		925
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Glu Glu Asp Lys Leu Thr Asp Trp Asn Lys Leu Ala Cys Leu Leu Cys		940
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<210> 709
 <211> 3807
 <212> DNA
 <213> Homo Sapiens

<400> 709

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<210> 710

<211> 1177

<212> PRT

<213> Homo Sapiens

<400> 710

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65             70             75             80
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Pro Pro Ser Asp Phe Arg Gly Arg Gly Thr Tyr Asp Leu Asp Phe Arg
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Thr Ala Asp Asp Arg Val Asn Pro Cys Ile Gly Gly Val Ile Leu Phe
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Val Ile Lys Ser Lys Gly Gly Val Val Gly Ile Lys Val Asp Lys Gly
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Asp Gly Leu Ser Glu Arg Cys Ala Gln Tyr Lys Lys Asp Gly Ala Asp
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Phe Ala Lys Trp Arg Cys Val Leu Lys Ile Gly Glu His Thr Pro Ser
145          150          155          160
Ala Leu Ala Ile Met Glu Asn Ala Asn Val Leu Ala Arg Tyr Ala Ser
165          170          175
Ile Cys Gln Gln Asn Gly Ile Val Pro Ile Val Glu Pro Glu Ile Leu
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Pro Asp Gly Asp His Asp Leu Lys Arg Cys Gln Tyr Val Thr Glu Lys
195          200          205
Val Leu Ala Ala Val Tyr Lys Ala Leu Ser Asp His His Ile Tyr Leu
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Glu Gly Thr Leu Leu Lys Pro Asn Met Val Thr Pro Gly His Ala Cys
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50        55        60
Thr Gln Phe Asp Val Lys Asn Asp Arg Tyr Ile Val Asn Gly Ser His
65        70        75        80
Glu Ala Asn Lys Leu Gln Asp Met Leu Asp Gly Phe Ile Lys Lys Phe
85        90        95
Val Leu Cys Pro Glu Cys Glu Asn Pro Glu Thr Asp Leu His Val Asn
100       105       110
Pro Lys Lys Gln Thr Ile Gly Asn Ser Cys Lys Ala Cys Gly Tyr Arg
115       120       125
Gly Met Leu Asp Thr His His Lys Leu Cys Thr Phe Ile Leu Lys Asn
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<213> Homo Sapiens
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-400-

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<210> 804

<211> 609

<212> PRT

<213> Homo Sapiens

<400> 804

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Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1             5             10             15
Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
             20             25             30
His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
             35             40             45
Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
             50             55             60
Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
             65             70             75             80
Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
             85             90             95
Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
             100             105             110
Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
             115             120             125
His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
             130             135             140
Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
             145             150             155             160
Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
             165             170             175
Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
             180             185             190
Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu

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195	200	205
Leu Arg Asp Glu Gly Lys	Ala Ser Ser Ala Lys	Gln Arg Leu Lys Cys
210	215	220
Ala Ser Leu Gln Lys Phe	Gly Glu Arg Ala Phe	Lys Ala Trp Ala Val
225	230	235
Ala Arg Leu Ser Gln Arg	Phe Pro Lys Ala Glu	Phe Ala Glu Val Ser
245	250	255
Lys Leu Val Thr Asp Leu	Thr Lys Val His Thr	Glu Cys Cys His Gly
260	265	270
Asp Leu Leu Glu Cys Ala	Asp Asp Arg Ala Asp	Leu Ala Lys Tyr Ile
275	280	285
Cys Glu Asn Gln Asp Ser	Ile Ser Ser Lys Leu	Lys Glu Cys Cys Glu
290	295	300
Lys Pro Leu Leu Glu Lys	Ser His Cys Ile Ala	Glu Val Glu Asn Asp
305	310	315
Glu Met Pro Ala Asp Leu	Pro Ser Leu Ala Ala	Asp Phe Val Glu Ser
325	330	335
Lys Asp Val Cys Lys Asn	Tyr Ala Glu Ala Lys	Asp Val Phe Leu Gly
340	345	350
Met Phe Leu Tyr Glu Tyr	Ala Arg His Pro Asp	Tyr Ser Val Val
355	360	365
Leu Leu Leu Arg Leu Ala	Lys Thr Tyr Glu Thr	Thr Leu Glu Lys Cys
370	375	380
Cys Ala Ala Ala Asp Pro	His Glu Cys Tyr Ala	Lys Val Phe Asp Glu
385	390	395
Phe Lys Pro Leu Val Glu	Glu Glu Pro Gln Asn	Leu Ile Lys Gln Asn Cys
405	410	415
Glu Leu Phe Lys Gln Leu	Gly Glu Tyr Lys Phe	Gln Asn Ala Leu Leu
420	425	430
Val Arg Tyr Thr Lys Lys	Val Pro Gln Val Ser	Thr Pro Thr Leu Val
435	440	445
Glu Val Ser Arg Asn Leu	Gly Lys Val Gly Ser	Lys Cys Cys Lys His
450	455	460
Pro Glu Ala Lys Arg Met	Pro Cys Ala Glu Asp	Tyr Leu Ser Val Val
465	470	475
Leu Asn Gln Leu Cys Val	Leu His Glu Lys Thr	Pro Val Ser Asp Arg
485	490	495
Val Thr Lys Cys Cys Thr	Glu Ser Leu Val Asn	Arg Arg Pro Cys Phe
500	505	510
Ser Ala Leu Glu Val Asp	Glu Thr Tyr Val Pro	Lys Glu Phe Asn Ala
515	520	525
Glu Thr Phe Thr Phe His	Ala Asp Ile Cys Thr	Leu Ser Glu Lys Glu
530	535	540
Arg Gln Ile Lys Lys Gln	Thr Ala Leu Val Glu	Leu Val Lys His Lys
545	550	555
Pro Lys Ala Thr Lys Glu	Gln Leu Lys Ala Val	Met Asp Asp Phe Ala
565	570	575
Ala Phe Val Glu Lys Cys	Cys Lys Ala Asp Asp	Lys Glu Thr Cys Phe
580	585	590
Ala Glu Glu Gly Lys Lys	Leu Val Ala Ala Ser	Gln Ala Ala Leu Gly
595	600	605
Leu		

<210> 805

<211> 1356
 <212> DNA
 <213> Homo Sapiens

<400> 805

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ttgccagaga	actgccggtg	tggtagtct	ccagtatggg	aggaagtgtc	caactctctg	180
ctctttgtag	acattcctgc	aaaaaagggt	tgccggtggg	attcattcac	caagcaagta	240
cagcagatga	ccatggatgc	cccagtcagc	tccgtggctc	ttcgccagtc	gggaggctat	300
gttgccacca	ttggaacaaa	gttctgtgct	ttgaactgga	aagaacaatc	agcagttgtc	360
ttggccacgg	tggataacga	caagaaaaaac	aatcgcttca	atgatgggaa	ggtggatccc	420
gccgggaggt	actttgctgg	caccatggct	gaggaaacag	ctccagcagt	tcttgagcgg	480
caccaggggg	ccctgtactc	cctctttcct	gatcaccacg	tgaaaaagta	ctttgaccag	540
gtggacattt	ccaatggttt	ggattggtcg	ctagaccaca	aaatcttcta	ttacattgac	600
agcctgtcct	actccgtgga	tgcctttgac	tatgacctgc	agacaggaca	gatctccaac	660
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gctgagggga	agctctgggt	ggcctgttac	aatggaggaa	gagtgattcg	tttagatcct	780
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tttgagggga	agaattactc	tgaatgtat	gtgacctgcg	cccgggatgg	gatggacccc	900
gagggctctt	tgaggcaacc	tgaagctggg	ggaattttca	agataactgg	tctgggggtc	960
aaaggaattg	ctccctactc	ctatgcggga	tgaggacagg	tcttctttcc	tgccagaggg	1020
agctctgaag	acaactagag	aattctgggc	ctgaaatttc	aatctagtta	gaaagaaaaa	1080
tgaggcaatg	attttattaa	cagcgttaag	ttttaattta	caacttttaa	aaggcagagc	1140
atttttaaca	aggggtgaca	ggtgggtttg	ataacacact	tataaggctt	tctgtaaaag	1200
gtactataga	agggcgaaga	atcgttcaac	tgtcaatcag	cctcttgatt	ctttgtaaat	1260
tgccaggggtg	ggtgggtaca	tatctcttct	tgattctgca	tttcatactt	aactatatta	1320
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<210> 806
 <211> 299
 <212> PRT
 <213> Homo Sapiens

<400> 806

Met	Ser	Ser	Ile	Lys	Ile	Glu	Cys	Val	Leu	Pro	Glu	Asn	Cys	Arg	Cys
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Gly	Glu	Ser	Pro	Val	Trp	Glu	Glu	Val	Ser	Asn	Ser	Leu	Leu	Phe	Val
			20					25					30		
Asp	Ile	Pro	Ala	Lys	Lys	Val	Cys	Arg	Trp	Asp	Ser	Phe	Thr	Lys	Gln
		35					40					45			
Val	Gln	Arg	Val	Thr	Met	Asp	Ala	Pro	Val	Ser	Ser	Val	Ala	Leu	Arg
	50					55					60				
Gln	Ser	Gly	Gly	Tyr	Val	Ala	Thr	Ile	Gly	Thr	Lys	Phe	Cys	Ala	Leu
65					70					75				80	
Asn	Trp	Lys	Glu	Gln	Ser	Ala	Val	Val	Leu	Ala	Thr	Val	Asp	Asn	Asp
				85					90					95	
Lys	Lys	Asn	Asn	Arg	Phe	Asn	Asp	Gly	Lys	Val	Asp	Pro	Ala	Gly	Arg
			100					105						110	
Tyr	Phe	Ala	Gly	Thr	Met	Ala	Glu	Glu	Thr	Ala	Pro	Ala	Val	Leu	Glu
			115					120						125	
Arg	His	Gln	Gly	Ala	Leu	Tyr	Ser	Leu	Phe	Pro	Asp	His	His	Val	Lys
		130					135					140			
Lys	Tyr	Phe	Asp	Gln	Val	Asp	Ile	Ser	Asn	Gly	Leu	Asp	Trp	Ser	Leu
145						150					155				160

Asp His Lys Ile Phe Tyr Tyr Ile Asp Ser Leu Ser Tyr Ser Val Asp
 165 170 175
 Ala Phe Asp Tyr Asp Leu Gln Thr Gly Gln Ile Ser Asn Arg Arg Ser
 180 185 190
 Val Tyr Lys Leu Glu Lys Glu Glu Gln Ile Pro Asp Gly Met Cys Ile
 195 200 205
 Asp Ala Glu Gly Lys Leu Trp Val Ala Cys Tyr Asn Gly Gly Arg Val
 210 215 220
 Ile Arg Leu Asp Pro Val Thr Gly Lys Arg Leu Gln Thr Val Lys Leu
 225 230 235 240
 Pro Val Asp Lys Thr Thr Ser Cys Cys Phe Gly Gly Lys Asn Tyr Ser
 245 250 255
 Glu Met Tyr Val Thr Cys Ala Arg Asp Gly Met Asp Pro Glu Gly Leu
 260 265 270
 Leu Arg Gln Pro Glu Ala Gly Gly Ile Phe Lys Ile Thr Gly Leu Gly
 275 280 285
 Val Lys Gly Ile Ala Pro Tyr Ser Tyr Ala Gly
 290 295

<210> 807
 <211> 1980
 <212> DNA
 <213> Homo Sapiens

<400> 807
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 atgaaagccg cggagagggg agatgtagaa aaagtttcct caatccttgc taaaaagggc 180
 atcaatccag gcaaactaga tgtggaaggc agatctgcct tccatgttgt ggccctcaaag 240
 gggaatcttg aatgtttgaa tgccatcctt atacatggag ttgatattac aaccagtgcac 300
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 aaacttctac agtacaattg tccactgaa catgcagacc tgcaggggaag aaccgcactt 420
 catgacgcag caatggcaga ctgtccttcc agcatacagc tgctttgtga ccatggggcc 480
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actgaaaaat ttgagagcat gaagagctta ttatcaagcg aagtaaata gaaggtgaaa 1860
aaaattggag agacagaaaag agagtatgaa aaatcactta ctgaaatcag acagttaagg 1920
agagagcttg agaattgtaa gcgcctaaact tcctcagcat gtcaagccag aggagcatga 1980

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<210> 808

<211> 659

<212> PRT

<213> Homo Sapiens

<400> 808

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Met Asn Cys Trp Phe Ser Cys Ala Pro Lys Asn Arg His Ala Ala Asp
20          25          30
Trp Asn Lys Tyr Asp Asp Arg Leu Met Lys Ala Ala Glu Arg Gly Asp
35          40          45
Val Glu Lys Val Ser Ser Ile Leu Ala Lys Lys Gly Ile Asn Pro Gly
50          55          60
Lys Leu Asp Val Glu Gly Arg Ser Ala Phe His Val Val Ala Ser Lys
65          70          75          80
Gly Asn Leu Glu Cys Leu Asn Ala Ile Leu Ile His Gly Val Asp Ile
85          90          95
Thr Thr Ser Asp Thr Ala Gly Arg Asn Ala Leu His Leu Ala Ala Lys
100         105         110
Tyr Gly His Ala Leu Cys Leu Gln Lys Leu Leu Gln Tyr Asn Cys Pro
115         120         125
Thr Glu His Ala Asp Leu Gln Gly Arg Thr Ala Leu His Asp Ala Ala
130         135         140
Met Ala Asp Cys Pro Ser Ser Ile Gln Leu Leu Cys Asp His Gly Ala
145         150         155         160
Ser Val Asn Ala Lys Asp Val Asp Gly Arg Thr Pro Leu Val Leu Ala
165         170         175
Thr Gln Met Cys Arg Pro Ala Ile Cys Gln Leu Leu Ile Asp Arg Gly
180         185         190
Ala Glu Ile Asn Ser Arg Asp Lys Gln Asn Arg Thr Ala Leu Met Leu
195         200         205
Gly Cys Glu Tyr Gly Cys Lys Asp Ala Val Glu Val Leu Leu Lys Asn
210         215         220
Gly Ala Asp Val Ser Leu Leu Asp Ala Leu Gly His Asp Ser Ser Tyr
225         230         235         240
Tyr Ala Arg Ile Gly Asp Asn Leu Asp Ile Leu Thr Leu Leu Lys Thr
245         250         255
Ala Ser Glu Asn Thr Asn Lys Gly Arg Glu Leu Trp Lys Lys Gly Pro
260         265         270
Ser Leu Gln Gln Arg Asn Leu Pro Tyr Met Leu Asp Glu Val Asn Val
275         280         285
Lys Ser Ser Gln Arg Glu His Arg Asn Ile Gln Glu Leu Glu Ile Glu
290         295         300
Asn Glu Asp Leu Lys Asp Arg Leu Arg Lys Ile Gln Gln Glu Gln Arg
305         310         315         320
Ile Leu Leu Asp Lys Val Asn Gly Leu Gln Leu Gln Leu Asn Glu Glu
325         330         335
Val Met Val Ala Asp Asp Leu Glu Ser Glu Lys Glu Lys Leu Lys Ser
340         345         350
Leu Leu Val Ala Lys Glu Lys Gln His Glu Glu Ser Leu Arg Thr Ile

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355 360 365
 Glu Ser Leu Lys Asn Arg Phe Lys Tyr Phe Glu Cys Thr Ser Pro Gly
 370 375 380
 Val Pro Ala His Met Gln Ser Arg Ser Met Leu Arg Pro Leu Glu Leu
 385 390 395 400
 Ser Leu Pro Asn Gln Thr Ser Tyr Ser Glu Asn Asp Leu Leu Lys Lys
 405 410 415
 Glu Leu Glu Ala Met Arg Thr Phe Cys Glu Ser Ala Lys Gln Asp Arg
 420 425 430
 Leu Lys Leu Gln Asn Gly Val Ala His Lys Val Ala Glu Cys Lys Ala
 435 440 445
 Leu Gly Leu Glu Cys Glu Arg Ile Lys Glu Asp Ser Asp Glu Gln Ile
 450 455 460
 Lys Gln Leu Glu Asp Ala Leu Lys Asp Val Gln Lys Arg Met Tyr Glu
 465 470 475 480
 Ser Glu Gly Lys Val Lys Gln Met Gln Thr His Phe Leu Ala Leu Lys
 485 490 495
 Glu His Leu Thr Ser Glu Ala Ala Ile Gly Asn His Arg Leu Met Glu
 500 505 510
 Glu Leu Lys Asp Gln Leu Lys Asp Met Lys Ala Lys Tyr Glu Gly Ala
 515 520 525
 Ser Ala Glu Val Gly Lys Leu Arg Asn Gln Ile Lys Gln Asn Glu Leu
 530 535 540
 Leu Val Glu Gln Phe Arg Arg Asp Glu Gly Lys Leu Val Glu Glu Asn
 545 550 555 560
 Lys Arg Leu Gln Lys Glu Leu Ser Met Cys Glu Thr Glu Arg Asp Lys
 565 570 575
 Lys Gly Arg Arg Val Ala Glu Val Glu Gly Gln Val Lys Glu Leu Leu
 580 585 590
 Ala Lys Leu Thr Leu Ser Val Pro Thr Glu Lys Phe Glu Ser Met Lys
 595 600 605
 Ser Leu Leu Ser Ser Glu Val Asn Glu Lys Val Lys Lys Ile Gly Glu
 610 615 620
 Thr Glu Arg Glu Tyr Glu Lys Ser Leu Thr Glu Ile Arg Gln Leu Arg
 625 630 635 640
 Arg Glu Leu Glu Asn Cys Lys Arg Gln Thr Ser Ser Ala Cys Gln Ala
 645 650 655
 Arg Gly Ala

<210> 809

<211> 1725

<212> DNA

<213> Homo Sapiens

<400> 809

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<210> 810

<211> 355

<212> PRT

<213> Homo Sapiens

<400> 810

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Met Ala Phe Ser Gly Ser Gln Ala Pro Tyr Leu Ser Pro Ala Val Pro
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20          25          30
Val Asn Gly Thr Val Leu Ser Ser Ser Gly Thr Arg Phe Ala Val Asn
35          40          45
Phe Gln Thr Gly Phe Ser Gly Asn Asp Ile Ala Phe His Phe Asn Pro
50          55          60
Arg Phe Glu Asp Gly Gly Tyr Val Val Cys Asn Thr Arg Gln Asn Gly
65          70          75          80
Ser Trp Gly Pro Glu Glu Arg Lys Thr His Met Pro Phe Gln Lys Gly
85          90          95
Met Pro Phe Asp Leu Cys Phe Leu Val Gln Ser Ser Asp Phe Lys Val
100         105         110
Met Val Asn Gly Ile Leu Phe Val Gln Tyr Phe His Arg Val Pro Phe
115         120         125
His Arg Val Asp Thr Ile Ser Val Asn Gly Ser Val Gln Leu Ser Tyr
130         135         140
Ile Ser Phe Gln Asn Pro Arg Thr Val Pro Val Gln Pro Ala Phe Ser
145         150         155         160
Thr Val Pro Phe Ser Gln Pro Val Cys Phe Pro Pro Arg Pro Arg Gly
165         170         175
Arg Arg Gln Lys Pro Pro Gly Val Trp Pro Ala Asn Pro Ala Pro Ile
180         185         190
Thr Gln Thr Val Ile His Thr Val Gln Ser Ala Pro Gly Gln Met Phe
195         200         205
Ser Thr Pro Ala Ile Pro Pro Met Met Tyr Pro His Pro Ala Tyr Pro
210         215         220

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Met Pro Phe Ile Thr Thr Ile Leu Gly Gly Leu Tyr Pro Ser Lys Ser
 225 230 235 240
 Ile Leu Leu Ser Gly Thr Val Leu Pro Ser Ala Gln Arg Phe His Ile
 245 250 255
 Asn Leu Cys Ser Gly Asn His Ile Ala Phe His Leu Asn Pro Arg Phe
 260 265 270
 Asp Glu Asn Ala Val Val Arg Asn Thr Gln Ile Asp Asn Ser Trp Gly
 275 280 285
 Ser Glu Glu Arg Ser Leu Pro Arg Lys Met Pro Phe Val Arg Gly Gln
 290 295 300
 Ser Phe Ser Val Trp Ile Leu Cys Glu Ala His Cys Leu Lys Val Ala
 305 310 315 320
 Val Asp Gly Gln His Leu Phe Glu Tyr Tyr His Arg Leu Arg Asn Leu
 325 330 335
 Pro Thr Ile Asn Arg Leu Glu Val Gly Gly Asp Ile Gln Leu Thr His
 340 345 350
 Val Gln Thr
 355

<210> 811
 <211> 1022
 <212> DNA
 <213> Homo Sapiens

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 <213> Homo Sapiens

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<211> 1392

<212> PRT

<213> Homo Sapiens

<400> 814

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CORRECTED
VERSION*CORRECTED
VERSION**

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

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(54) Title: CANCER ASSOCIATED NUCLEIC ACIDS AND POLYPEPTIDES

(57) Abstract

Tumor cell-specific antigens from melanoma cells have previously been identified using autologous cytolytic T cells clones from the patient, but the same approach did not work well with other tumour types. Here, screening of such antigens was successfully performed using antisera from the patient. Provided are several tumor cell-specific antigens, nucleic acids encoding them, antibodies and CTL's directed against these antigens, antigenic fragments diagnostic kits, etc.

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National Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/12 C07K14/705 C12Q1/68 G01N33/53 C07K16/28
 A61K38/17 A61K31/70 A61K39/00 A61K35/12 A61K39/395
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 6 C12N C07K A61K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 97 17470 A (HOLLAND JAMES F) 15 May 1997</p> <p>Also against claims 82-84,116,117see whole document, particularly the claims</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/-</p>	<p>1,2, 4-10,18, 21-23, 27,28, 31,32, 40,42, 44,45, 48-51, 58-60, 67-70, 76-79</p>

☒ Further documents are listed in the continuation of box C.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>GB 2 273 099 A (ASTA MEDICA AG) 8 June 1994</p> <p>Also against claims 108,109,116,117. See whole document, particularly the claims and examples.</p> <p style="text-align: center;">---</p>	<p>1,2, 4-10,31, 32,40, 42,43, 49,50, 58-60, 67,69, 71,72, 74-79, 82-84, 99-104</p>
X	<p>WO 97 17441 A (KISHIMURA MASAOKI ;OSAKADA FUMIO (JP); OSAKI SHOICHI (JP); NAKAO K) 15 May 1997</p> <p>see the whole document -& EP 0 869 176 A (KANEKA CORPORATION, OSAKA, JAPAN) 7 October 1998 Also against claims 68-72,74,76,77,82,116,117 see claims 10,12; examples 2,5</p> <p style="text-align: center;">---</p>	<p>1,2,4-8, 13,18, 21,22, 24, 27-29, 31,32, 35,40, 42,44, 45, 47-50, 54,59, 60,63,67</p>
X	<p>WO 97 02362 A (FOX CHASE CANCER CENTER) 23 January 1997</p> <p>see the whole document, particularly the claims and seq. 1 and 2. Also against claims 70-72,74,76-80,82-85,88,89,99-104,108-111, 116,117. see page 18, line 20 - page 22, line 33</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	<p>1,2, 4-10,15, 18, 21-24, 27-29, 31,32, 37,40, 42-45, 47-50, 56, 58-60, 65,67</p>

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Category ³	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>VAUGHAN, J.H. ET AL.: "Epstein-Barr virus-induced autoimmune responses." JOURNAL OF CLINICAL INVESTIGATION, vol. 95, no. 3, March 1995, pages 1306-15, XP002103180</p> <p>see the whole document -& DATABASE EMBL - EMHUM1 Entry HSIIGGAUA, Acc.no. L38696, 17 February 1995 VAUGHAN, J.H. ET AL.: "Homo sapiens autoantigen p542 mRNA, complete cds." XP002103198 see the whole document</p>	<p>1,2,18, 21,22, 24, 27-29, 31,35, 40,44, 45, 47-50, 54,59, 60,63, 67-72, 74-80,82</p>
X	<p>MASHIMO, J. ET AL.: "Decrease in the expression of a novel TGF beta1-inducible and ras-recision gene, TSC-36, in human cancer cells." CANCER LETTERS, vol. 113, March 1997, pages 213-9, XP002104545 see abstract</p>	<p>1,2, 4-10,13</p>
X	<p>MACHIELS, B.M. ET AL.: "Nuclear lamin expression in normal testis and testicular germ cell tumours of adolescents and adults." JOURNAL OF PATHOLOGY, vol. 182, no. 2, June 1997, pages 197-204, XP002104546 see abstract see page 198, left-hand column, paragraph 2</p>	<p>1,2, 4-10,15, 31,32, 37,40, 42,116, 117</p>
X	<p>COATES, P.J. ET AL.: "Identification of the antigen recognized by the monoclonal antibody BU31 as lamins A and C" JOURNAL OF PATHOLOGY, vol. 178, no. 1, January 1996, pages 21-9, XP002104547 see abstract</p>	<p>1,2, 4-10,15, 31,32, 37,40, 42,116, 117</p>

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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>ZWIJSEN, A. ET AL.: "Characterization of a rat C6 glioma-secreted follistatin-related protein (FRP); cloning and sequencing of the human homologue." EUROPEAN JOURNAL OF BIOCHEMISTRY, vol. 225, no. 3, November 1994, pages 937-46, XP002103181</p> <p>see page 945, right-hand column, paragraph 2-4; figure 3</p>	<p>18,21, 22,24, 27,28, 44,45, 47-50, 54,59, 60,63, 67-72, 74-80,82</p>
X	<p>--- MINEGISHI, M. ET AL.: "Structure and function of Cas-L, a 105 kD Crk-associated substructure-related protein that is involved in beta-1 integrin-mediated signaling in lymphocytes." JOURNAL OF EXPERIMENTAL MEDICINE, vol. 184, no. 4, 1 October 1996, pages 1365-75, XP002103183</p> <p>also against claims 116 and 117 see figure 4</p>	<p>18, 21-23, 27-29, 31,32, 37,40, 44,45, 47-50, 56, 58-60, 65, 67-72, 74-80, 82-84</p>
X	<p>--- JIN, Y-J. ET AL.: "The 25-kDa FK506-binding protein is localized in the nucleus and associated with casein kinase II and nucleolin." PROC.NAT'L.ACAD.SCI.USA, vol. 90, August 1993, pages 7769-73, XP002104548 see the whole document</p>	<p>31,32, 35,40, 116,117</p>
X	<p>--- WO 96 15149 A (UNIV WASHINGTON) 23 May 1996 see page 23, line 2 - line 3</p>	<p>31,32, 37,40</p>
X	<p>--- WO 97 21729 A (SLOAN KETTERING INST CANCER) 19 June 1997</p> <p>see page 3, line 24 - line 29 see page 6, line 27 - line 29; figure 3 see page 27, line 15 see page 28, line 27 - line 28</p> <p style="text-align: center;">--- -/--</p>	<p>31,32, 37, 40-42, 116,117</p>

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International Application No
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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>NOCE, T. ET AL.: "Expresson of a mouse zinc finger protein gene in both spermatocytes and oocytes during meiosis." DEVELOPMENTAL BIOLOGY, vol. 153, no. 2, October 1992, pages 356-67, XP002104549 see abstract; figures 1,5-7 -& DATABASE EMBL - EMROD Entry MMZFP51, Acc.no. D10630, 8 November 1992 NOCE, T. ET AL.: "Mouse mRNA for zinc finger protein, complete cds." XP002104555 see the whole document</p>	<p>31,32, 37,40, 42, 67-70, 116,117</p>
X	<p>ONO M ET AL: "NUCLEOTIDE SEQUENCE OF HUMAN ENDOGENOUS RETROVIRUS GENOME RELATED TO THE MOUSE MAMMARY TUMOR VIRUS GENOME" JOURNAL OF VIROLOGY, vol. 60, no. 2, 1 November 1986, pages 589-598, XP000673638 see page 597, left-hand column, paragraph 5 - right-hand column, paragraph 1; figure 1</p>	<p>44,45, 47,48, 59,60, 67-72,74</p>
X	<p>--- DATABASE EMBL - EMBL16 Entry HSC9958, Acc.no. C15995, 29 September 1996 FUJIWARA, T. ET AL.: "Human fetal brain cDNA 5'-end GEN-421G02." XP002103191 see the whole document</p>	<p>44,59, 60,63, 67-70</p>
X	<p>--- DATABASE EMBL - EMBL13 Entry HS570350, Acc.no. W45570, 27 May 1996 HILLIER, L. ET AL.: "zc26f08.s1 Soares senescent fibroblasts NbHSF Homo sapiens cDNA clone 323463 3'" XP002103192 see the whole document</p>	<p>44,59, 60,63, 67-70</p>
X	<p>--- DATABASE EMBL - EMBL15 Entry HSA07407, Acc.no. AA007407, 28 July 1996 HILLIER, L. ET AL.: "zh97b08.r1 Soares fetal liver spleen 1NFLS S1 Homo sapiens cDNA clone 429207 5'" XP002103193 see the whole document</p>	<p>44,59, 60,63, 67-70</p>

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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HUNG, D.T. ET AL.: "cDNA cloning of a human 25 kDa FK506 and rapamycin binding protein." BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 184, no. 2, 30 April 1992, pages 733-8, XP002103178 see figure 2	44,59, 60,63, 67-70
X	JIN, Y-J. ET AL.: "Molecular cloning of a 25-kDa high affinity rapamycin binding protein, FKBP25." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 267, no. 16, 5 June 1992, pages 10942-5, XP002104550 see figure 3	44, 47-50, 54,59, 60,63, 67-72, 75,83,84
X	MACLEOD, A.R. ET AL.: "A muscle-type tropomyosin in human fibroblasts: evidence for expression by an alternative RNA splicing mechanism." PROC.NAT'L.ACAD.SCI.USA, vol. 82, December 1985, pages 7835-9, XP002103179 see figures 2,3	44,59, 60,63, 67-70
X	DATABASE EMBL - EMEST20 Entry/Acc.no. T09468, 8 August 1993 ADAMS, M.D. ET AL.: "EST07361 Homo sapiens cDNA clone HIBBU63 5' end." XP002103195 see the whole document -& ADAMS, M.D. ET AL.: "Rapid DNA sequencing (expressed sequence tags) from a directionally cloned human infant brain cDNA library." NATURE GENETICS, vol. 4, 1993, pages 373-380, XP000574910 see the whole document	44,45, 67,70
X	DATABASE EMBL - EMEST17 Entry HSZZ32361, Acc.no. AA327309, 18 April 1997 ADAMS, M.D. ET AL.: "EST30621 Colon I Homo sapiens cDNA 5' end." XP002103199 see the whole document -& ADAMS, M.D. ET AL.: "Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of cDNA sequence." NATURE, vol. 377, 1995, pages 3-17, XP002042918 see the whole document	44,45, 60,62, 67,70

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL - EMBEST15 Entry HSAA33416, Acc.no. AA133416, 6 December 1996 HILLIER, L. ET AL.: "zk96e08.r1 Soares pregnant uterus NbHPU Homo sapiens cDNA clone 490694 5'." XP002103196 see the whole document</p>	44,45, 67,70
X	<p>--- DATABASE EMBL - EMBEST11 Entry HS1282878, Acc.no. AA487071, 28 June 1997 HILLIER, L. ET AL.: "ab18f11.s1 Stratagene lung (#937210) Homo sapiens cDNA clone 841197 3' similar to contains Alu repetitive element." XP002103197 see the whole document</p>	44,45, 67,70
X	<p>--- DATABASE EMBL - EMBEST15 Entry HSAA21198, entry AA121198, 21 November 1996 HILLIER, L. ET AL.: "z188g08.r1 Stratagene colon (#937204) Homo sapiens cDNA clone 511742 5'." XP002103200 see the whole document</p>	44,45, 60,62, 67,70
X	<p>--- DATABASE EMBL - EMBEST15 Entry HSAA21174, Acc.no. AA121174, 21 November 1996 HILLIER, L. ET AL.: "z188g08.s1 Stratagene colon (#937204) Homo sapiens cDNA clone 511742 3'." XP002103202 see the whole document</p>	44,45, 60,62, 67,70
X	<p>--- DATABASE EMBL - EMBEST17 Entry HSW22160, Acc.no. W22160, 9 May 1996 NATHANS, J.: "63A6 Human retina cDNA Tsp509I-cleaved sublibrary Homo sapiens cDNA not directional." XP002103201 see the whole document</p>	44,45, 60,62, 67,70
X	<p>--- DATABASE EMBL - EMBEST15 Entry HSA29201, Acc.no. AA029201, 20 August 1996 HILLIER, L. ET AL.: "zk12f08.s1 Soares pregnant uterus NbHPU Homo sapiens cDNA clone 470343 3'." XP002103203 see the whole document</p>	44,45, 60,62, 67,70

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X	<p>DATABASE EMBL - EMBEST17 Entry HSW29097, Acc.no. W29097, 14 May 1996 NATHANS, J.: "56d11 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA." XP002103204 see the whole document</p>	<p>44,45, 60,62, 67,70</p>
X	<p>MIKI Y ET AL: "A STRONG CANDIDATE FOR THE BREAST AND OVARIAN CANCER SUSCEPTIBILITY GENE BRCA1" SCIENCE, vol. 266, no. 12, 7 October 1994, pages 66-71, XP000202410 see the whole document -& DATABASE EMBL - EMBEST5 Entry/Acc.no. AF039241, 17 January 1998 MIKI, Y. ET AL.: "Homo sapiens clone 11-67js mRNA,partial sequence." XP002103205 see the whole document</p>	<p>44,45, 60,62, 67,70</p>
X	<p>DATABASE EMBL - EMBEST18 Entry MM1140465, Acc.no. AA221749, 15 February 1997 MARRA, M. ET AL.: "my28g01.r1 Barstead mouse pooled organs MPLRB4 Mus musculus cDNA clone 697200 5' similar to TR:E239664 E239664 CHROMOSOME XIV READING FRAME ORF YNL021W." XP002103206 see the whole document</p>	<p>44,45, 60,62, 67,70</p>
X	<p>NAGASE T ET AL: "PREDICTION OF THE CODING SEQUENCES OF UNIDENTIFIED HUMAN GENES VI.THE CODING SEQUENCES OF 80 NEW GENES (KIAA0201-KIAA0280) DEDUCED BYANALYSIS OF CDNA CLONES FROM CELL LINE KG-1 AND BRAIN" DNA RESEARCH, vol. 3, no. 5, 1 January 1996, pages 321-329, XP002059454 see the whole document -& DATABASE EMBL - EMHUM1 Entry HSD455, Acc.no. D87455, 9 November 1996 NOMURA, N.: "Human mRNA for KIAA0266 gene, complete cds." XP002103207 see the whole document</p>	<p>44,45, 60,62, 67,70</p>

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL - EMBEST16 Entry HSAA51187, Acc.no. AA151187, 15 December 1996 HILLIER, L. ET AL.: "zo03c11.r1 Stratagene colon (#937204) Homo sapiens cDNA clone 566612 5'." XP002103208 see the whole document</p> <p>---</p>	44,45, 60,62, 67,70
X	<p>DATABASE EMBL - EMHUM2 Entry HSU50839, Acc.no. U50839, 9 March 1997 LATIF, F. ET AL.: "Homo sapiens gl6 protein (gl6) mRNA, complete cds." XP002103209 see the whole document</p> <p>---</p>	44,45, 60,64, 67,70
X	<p>LI, H. ET AL.: "Isolation and sequence analysis of the human syntaxin-encoding gene." GENE, vol. 143, 1994, pages 303-4, XP002103182 see the whole document</p> <p>---</p>	44,45, 47,48, 59,60, 65, 70-72, 74,83,84
X	<p>DATABASE EMBL - EMBEST11 Entry HS1188646, Acc.no. AA285170, 5 April 1997 STRAUSBERG, R.: "zs48f04.s1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:700735-3'." XP002103210 see the whole document</p> <p>---</p>	44,45, 59,60, 67-70
X	<p>FISHER, D.Z. ET AL.: "cDNA sequencing of nuclear lamins A and C reveals primary and secondary structural homology to intermediate filament proteins." PROC.NAT'L.ACAD.SCI.USA, vol. 83, September 1986, pages 6450-4, XP002103184 see figure 2</p> <p>---</p>	44,45, 59,60, 67-70
X	<p>DATABASE EMBL - EMBEST16 Entry HSAA54222, Acc.no. AA454222, 11 June 1997 HILLIER, L. ET AL.: "zx48g12.s1 Soares testis NHT Homo sapiens cDNA clone 795526 3' similar to gb:D42040 RING3 PROTEIN (HUMAN)" XP002103189 see the whole document</p> <p>---</p>	67,69

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL - EMBEST11 Entry HS125289, Acc.no. AA454221, 11 June 1997 HILLIER, L. ET AL.: "zx48g12.r1 Soares testis NHT Homo sapiens cDNA clone 795526 5' similar to TR:E243068 E243068 KINASE." XP002103190 see the whole document</p>	67,69
X	<p>--- DATABASE EMBL - EMBEST20 Entry MMAA84412, Acc.no. AA184412, 19 February 1997 MARRA, M. ET AL.: "mt34f07.r1 Soares mouse 3NbMS Mus musculus cDNA clone 622981 5' similar to SW:OXYB_HUMAN P22059 OXYSTEROL-BINDING PROTEIN." XP002103194 see the whole document</p>	67-70
A	<p>--- WO 96 29409 A (LUDWIG INST CANCER RES ;UNIV LEIDEN (NL)) 26 September 1996 see the whole document</p>	1-11, 17-33, 39-52, 58-61, 67-117
A	<p>--- WO 92 20356 A (LUDWIG INST CANCER RES) 26 November 1992 see the whole document, particularly the claims</p>	1-11, 17-33, 39-52, 58-61, 67-117
A	<p>--- WO 95 23874 A (LUDWIG INST CANCER RES) 8 September 1995 see page 5, line 10-14; claims 3,4,7; examples 33,36,43,44</p>	1-4
A	<p>--- FRANZÉN, B. ET AL.: "Analysis of polypeptide expression in benign and malignant human breast lesions: down-regulation of cytokeratins." BRITISH JOURNAL OF CANCER, vol. 73, 1996, pages 1632-8, XP002104551 see abstract</p>	1,2,4-9, 13
A	<p>--- WO 96 10413 A (LUDWIG INST CANCER RES) 11 April 1996 see the whole document, particularly the claims see abstract</p>	3,19,20, 26,39
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A	BOON T ET AL: "Tumor antigens recognized by T cells" IMMUNOLOGY TODAY, vol. 18, no. 6, June 1997, page 267-268 XP004068293 see the whole document ---	
A	SAHIN, U. ET AL.: "Human neoplasms elicit multiple specific immune responses in the autologous host." PROC.NATL.ACAD.SCI.USA, vol. 92, December 1995, pages 11810-3, XP002091914 cited in the application see the whole document ---	
P,X	DATABASE EMBL - EMHUM1 Entry/Acc.no. AC004022, 22 January 1998 HINDS, K. ET AL.: "Homo sapiens BAC clone GS155M11 from 7q21-q22, complete sequence." XP002091837 from nt.330-810 ---	1,2
P,X	ALAIYA, A.A. ET AL.: "Phenotypic analysis of ovarian carcinoma: polypeptide expression in benign, borderline and malignant tumors." JOURNAL OF CNACER, vol. 73, no. 5, 27 November 1997, pages 678-83, XP002104552 see abstract; figure 2 ---	1-10,15
P,X	GÜRE, A.O. ET AL.: "Human lung cancer antigens recognized by autologous antibodies: definition of a novel cDNA derived from the tumor suppressor gene locus on chromosome 3p21.3" CANCER RESEARCH, vol. 58, 1 March 1998, pages 1034-41, XP002103188 see the whole document ---	1,2,4,5, 9,14,18, 21,22, 27,44, 45,49, 50,55, 59,60, 64, 67-70, 83,84
P,X	SCANLAN, M.J. ET AL.: "Characterization of human colon cancer antigens recognized by autologous antibodies" INTERNATIONAL JOURNAL OF CANCER, 29 May 1998, pages 652-8, XP002103186 see the whole document ---	31,32, 34,40, 59,60, 62, 67-70, 83,84, 116

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>NAGASE, T. ET AL.: "Prediction of the coding sequence of unidentified human genes. IX. The complete sequence of 100 new cDNA clones from barin which can code for large proteins in vivo."</p> <p>DNA RESEARCH, vol. 5, 28 February 1998, pages 31-39, XP002103187</p> <p>see figure 1; table 3</p> <p>-& DATABASE EMBL Entry/acc.no. AB011172, 10 April 1998</p> <p>NAGASE, T. ET AL.: "Homo sapiens mRNA for KIAA0600 protein, partial cds." XP002104556</p> <p>see the whole document</p>	44,45, 67-70, 83,84
P,X	<p>---</p> <p>JONES, M.H. ET AL.: "Identification and characterization of BRDT: a testis-specific gene related to the bromodomain genes RING3 and Drosophila fsh."</p> <p>GENOMICS, vol. 45, no. 3, 1 November 1997, pages 529-34, XP002103185</p> <p>see page 529, right-hand column, paragraph 2</p> <p>see page 530, left-hand column, paragraph 2; figure 1</p> <p>see page 532, right-hand column, paragraph 2</p>	44,45, 59,60, 67-70, 83,84
P,X	<p>---</p> <p>ISHIKAWA K ET AL: "Prediction of the coding sequences of unidentified human genes. X The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro"</p> <p>DNA RESEARCH, vol. 5, no. 321, 30 June 1998, pages 169-176, XP002089186</p> <p>see abstract; figures 1,2; table 2</p>	44,59, 60,63, 67-70
E	<p>---</p> <p>US 5 858 723 A (MUELLER-LANTZSCH NIKOLAUS ET AL) 12 January 1999</p> <p>Also against claims 108,109,116,117 see the whole document</p> <p>---</p>	1,2, 4-10,31, 32,40, 42,43, 49,50, 58-60, 67,69, 71,72, 74-79, 82-84, 99-104
	<p>---</p> <p>-/--</p>	

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	<p>WO 98 40483 A (HUMAN GENOME SCIENCES INC ;GREENE JOHN M (US); LI YI (US); ROSEN C) 17 September 1998</p> <p>Also against claims 74,76-80,82-85,88,89, 99-104,108,109,111,116,117. See seq. 24 and the claims.</p>	<p>1,2, 4-10,14, 18, 21-24, 27,28, 31,32, 36,40, 44,45, 47-50, 55, 58-60, 64,67-72</p>
E	<p>WO 98 08866 A (WISTAR INST) 5 March 1998 see the whole document</p>	<p>1,2</p>
E	<p>WO 98 48015 A (CHUGAI RES INST MOLECULAR MED ;JONES MICHAEL H CHUGAI RESEARC (JP)) 29 October 1998</p> <p>see whole document, particularly the claims. & DATABASE WPI Derwent Publications Ltd., London, GB; AN 98-583658 XP002103211 see abstract</p>	<p>18,22, 23, 27-29, 31,32, 40, 44-50, 58-60, 67-72, 74, 76-78, 85,88, 89,102, 103</p>
E	<p>WO 98 32853 A (GENETICS INST) 30 July 1998</p> <p>see seq. 7 and 8 see page 6, line 23 - page 8, line 12; claims 20-22 see page 21, line 17 - page 22, line 11</p>	<p>18,21, 22,24, 27-29, 44,45, 47-50, 53,59, 60,62, 67-72, 74, 76-80,82</p>

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	<p>SCANLAN, M.J. ET AL.: "Isoforms of the human PDZ-73 protein exhibit differential tissue expression"</p> <p>BIOCHIMICA ET BIOPHYSICA ACTA, vol. 1445, no. 1, 1999, pages 39-52, XP002104553</p> <p>also for claims 77-80,82-84,116.</p> <p>see the whole document</p> <p>---</p>	
T	<p>DRABKIN, H.A. ET AL.: "DEF-3(g16/NY-LU-12), an RNA binding protein from the 3p21.3 homozygous deletion region in SCLC"</p> <p>ONCOGENE, vol. 18, 1999, pages 2589-97, XP002104554</p> <p>see the whole document</p> <p>-----</p>	

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 85-111 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-14, 17-36, 39-55, 58-64, 67-117; see additional sheets, pages 3-4.
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-11,17-33,39-52,58-61,67-117,
all partially

The nucleic acid sequence of Seq.ID 1, fragments or complements thereof, and the corresponding polypeptide(s) encoded thereby, and immunogenic and/or HLA binding fragments thereof, optionally as part of a complex with a HLA molecule, an expression vector comprising said nucleic acid, and optionally a human HLA molecule, a host cell transformed with said vector, and an antibody against said polypeptide(s).

Also a method of diagnosing of a disorder characterised by overexpression of said polypeptide(s) and a method for determining regression, progression or onset of a disease associated with overexpression of said polypeptide(s), using agents that specifically bind to said nucleic acid, said polypeptide(s) or complexes of (fragments of) said polypeptide(s) and a HLA molecule. A kit comprising two polynucleotides for the detection of said nucleic acid
Also pharmaceutical preparations

- which enrich the presence of said polypeptide-HLA complex, optionally comprising an adjuvant, or
- which inhibits the expression of said polypeptide(s), or
- comprising an agent that selectively binds said polypeptide, optionally as a conjugate with a diagnostic or therapeutic compound, or
- comprising said nucleic acid, optionally in an expression vector, optionally in a host cell, or
- comprising said polypeptide(s), optionally in combination with an adjuvant, or
- comprising cytolytic T cells, specific for said polypeptide-HLA complex, or
- comprising an antibody against said polypeptide(s).

Inventions 2-119: claims 1-11,13,15,17-33,35,37,
39-52,54,56,58-61,63,65,67-117, all partially (1)

Inventions 2-119: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:2-40,66,89-169 (odd numbers), 170,172,174, and 176-210, where invention 2 is limited to Seq.ID:2 and corresponding polypeptides encoded thereby, invention 3 is limited to Seq.ID:3 and corresponding polypeptides encoded thereby,....., and invention 119 is limited to Seq.ID:210 and corresponding polypeptides encoded thereby.

Invention 120: claims 1-10,13,17-32,35,
39-51,54,58-60,63,67-117, all partially

Idem as subject 1 but limited to the DNA sequences seq.ID:211 and 329 and corresponding polypeptides encoded thereby.

Inventions 121-452: claims 1-10,13,16-32,35,38-51, 54,57-60,63,66-117, all partially (1)

Inventions 121-452: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:212-328, and 330-543, where invention 121 is limited to Seq.ID:211 and corresponding polypeptides encoded thereby, invention 122 is limited to Seq.ID:212 and corresponding polypeptides encoded thereby,....., and invention 452 is limited to Seq.ID:543 and corresponding polypeptides encoded thereby.

Invention 453: claims 1-10,12,17-32,34,39-51,53, 58-60,62,67-117, all partially

Idem as subject 1 but limited to the DNA sequences seq.ID:544 and 554 and corresponding polypeptides encoded thereby.

Inventions 454 and 455: claims 1-10,12,17-32,34, 39-51,53,58-60,62,67-117, all partially

Inventions 454 and 455: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:546 and 548, where invention 454 is limited to Seq.ID:546 and corresponding polypeptides encoded thereby, and invention 455 is limited to Seq.ID:548 and corresponding polypeptides encoded thereby.

Invention 456: claims 1-10,12,17-32,34,39-51,53, 58-60,62,67-117, all partially

Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:550, 552, 556, 558 and 560 and corresponding polypeptides encoded thereby.

Inventions 457-582: claims 1-10,12-14,17-32,34-36, 39-51,53-55,58-60,62-64,67-117, all partially (1)

Inventions 457-582: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:562-586 (even numbers),

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588-683, 686, 687, 689, 691, 692, 692, and 696-706, where invention 457 is limited to Seq.ID:562 and corresponding polypeptides encoded thereby, invention 458 is limited to Seq.ID:564 and corresponding polypeptides encoded thereby,....., and invention 582 is limited to Seq.ID:706 and corresponding polypeptides encoded thereby.

Invention 583: claims 1-10, 14, 17-32, 36, 39-51, 55, 58-60, 64, 67-117, all partially

Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:707, 709, 711 and 712 and corresponding polypeptides encoded thereby.

Inventions 584-592: claims 1-117, all partially (1)

Inventions 584-592: Idem as subject 1 but limited to each of the DNA sequences as in Seq.ID:799-815 (odd numbers), where invention 584 is limited to Seq.ID:799 and corresponding polypeptides encoded thereby, invention 585 is limited to Seq.ID:801 and corresponding polypeptides encoded thereby,....., and invention 592 is limited to Seq.ID:815 and corresponding polypeptides encoded thereby).

For the sake of conciseness, the subject matter of the first invention is explicitly defined, the other subject matters are defined by analogy thereto.

(1) In as far as the claims searched for a group of inventions refer to specific groups of sequences, only those claims which refer to the groups comprising the nucleic acid sequence of a particular invention, and/or its corresponding polypeptide sequence(s), form parts of that invention.

Due to the fact that extensive sequence homologies were found between several groups of sequences during the additional searches, some of the sequences have been grouped, whereby each of these groups comprising two or more such homologous sequences is considered to be one invention.

Claims searched during primary and additional searches: 1-14, 17-36, 39-55, 58-64, 67-117, limited to:

Invention 1, seq.ID.1
Invention 52, seq.ID.111, and 112 (transl.)
Invention 61, seq.ID.129, and 130 (transl.)
Invention 71, seq.ID.149, and 150 (transl.)
Invention 72, seq.ID.151, and 152 (transl.)
Invention 116, seq.ID.206
Invention 120, seq.ID.211 and 329; (related sequences)
Invention 137, seq.ID.228
Invention 139, seq.ID.330

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Invention 219, seq.ID.411
Invention 453, seq.ID.544, and 545 (transl.),
and seq.ID.554, and 555 (transl.);
(related sequences)
Invention 454, seq.ID.546, and 547 (transl.)
Invention 455, seq.ID.548, and 548 (transl.)
Invention 456, seq.ID.550, and 551 (transl.),
and seq.ID.552, and 553 (transl.),
and seq.ID.556, and 557 (transl.),
and seq.ID.558, and 559 (transl.),
and seq.ID.560, and 561 (transl.);
(related sequences)
Invention 547 seq.ID.665
Invention 548, seq.ID.666
Invention 554, seq.ID.672
Invention 558, seq.ID.676
Invention 563, seq.ID.681
Invention 566, seq.ID.686
Invention 583, seq.ID.707, and 708 (transl.),
and seq.ID.709, and 710 (transl.),
and seq.ID.711,
and seq.ID.712;
(related sequences).

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